Recd May 2, 1933
1d. post
.10

METALWORKING TOOLS.

LIST No. 332.

1933.

GEORGE ADAMS,
290 292 293, HIGH HOLBORN,
LONDON, W.C.1.

PRICE 6d.

GEORGE ADAMS

290, 292, 293, HIGH HOLBORN

LONDON, W.C.1

Telephone:
HOLBORN 5217, 5218.

Telegraphic Address:
"ELABORATOR, HOLB, LONDON."

METALWORKING TOOL LIST No. 332

1933

Important. Customers are specially requested to write their **Full Names and Addresses very legibly** and to state the nearest railway station in case packages should be too heavy for parcel post.

Packing. We employ an experienced staff of packers and use all the care we can to protect goods against injury in transit. Some articles have light cast iron frames. It is obvious that, however well they may be packed, if they have a fall on the way something is sure to be broken, even if the case itself be not apparently damaged.

A clean receipt should never be given for goods received until they have been examined, and if found damaged a claim should be lodged at once.

All goods are sold ex warehouse London and are forwarded at purchaser's risk.
The **Cost of Postage** is inserted against each article which will go by parcel post. This cost is for one article **in Great Britain only,** not abroad nor in the Colonies.
Customers should state how they wish goods to be dispatched, for if the items ordered are too heavy for parcel post, they may have to go by goods train, carriage forward, or by passenger train, carriage paid, if the instructions we receive are clearly stated and cash for the latter accompanies the order.

We pay carriage in the United Kingdom where on one delivery a number of small articles exceeds £5 in value of a total weight not above 28 lbs.

Export Orders receive special attention. We have an expert staff of packers for these orders. Customers should allow some margin of price to cover the extra cost of packing for export. All consignments too heavy for parcel post will be shipped freight and insurance forward unless we are otherwise instructed. Customers abroad wishing us to send goods cash on delivery should give the names of their bankers in cases where goods have to be shipped and bills of lading to be forwarded. If goods ordered will pack for parcel post, they will be sent by this method provided that the cash on delivery system is in operation where the parcels are addressed to. Customers abroad requiring us to send cash on delivery should enclose with their order cash to the value of one-third of the amount. The balance can be collected on delivery.

Warranty. All the goods sold by us are guaranteed of good material and workmanship. Provided they are properly used for the purpose for which they are intended and not otherwise, we will replace anything faulty or unsatisfactory if returned to us carriage paid within one month from date of purchase.

Terms of Payment. All the prices in this list are **nett**, subject to no deduction, and are based on cash with order terms of business. This list is issued early in 1933, when prices are still subject to unforeseen fluctuations. In any case, customers may rely always on our charging the lowest possible price current at the time of dispatch.

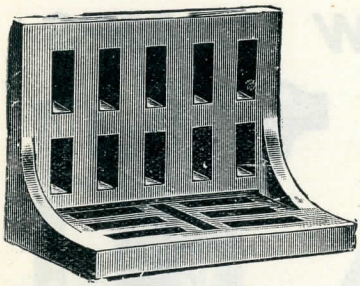
The printed List Prices are subject to alteration without notice.

Ledger Accounts. We shall be pleased to open ledger accounts with customers on receipt of the usual trade and bankers' references.

Hours of Business. 8.30 a.m. to 6 p.m. Saturdays 8.30 a.m. to 1 p.m.

PRICE ALTERATIONS SINCE PUBLICATION.

ANGLE PLATES

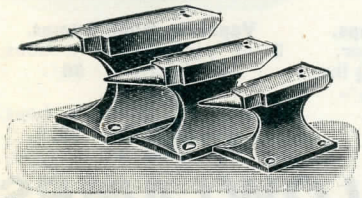


Plain Angle Plate.

3 × 1½ × 1½	3 × 2 × 2	3 × 2½ × 2	3½ × 1½ × 1½
2/- Pst. 6d.	**2/4** Pst. 6d.	**3/3** Pst. 6d.	**2/3** Pst. 6d.
3½ × 2 × 1½	4 × 2 × 2	4 × 2½ × 2½	4 × 3 × 3
3/- Pst. 6d.	**3/6** Pst. 9d.	**3/9** Pst. 9d.	**4/3** Pst. 9d.
4½ × 4 × 3	5 × 4 × 4	6 × 5 × 4½	6 × 6 × 6
5/- Pst. 9d.	**6/9** Pst. 1/-	**9/4** Pst. 1/3	**10/-** Pst. 1/3
8 × 5 × 4½	9 × 9 × 9	9 × 5½ × 3½	10 × 6 × 6
11/4 Rail	**12/4** Rail	**11/4** Rail	**14/8** Rail

Larger Sizes, prices on application. British made.

ANVILS



Steel Bench Anvils, surfaces highly polished.

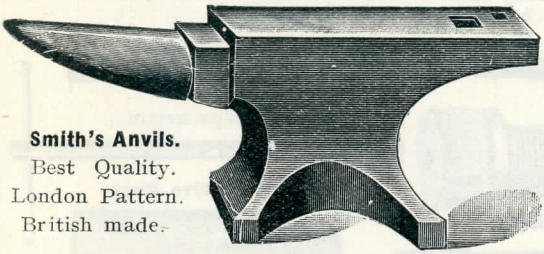
Steel Bench Anvils. British made.

No. 1. Length, including horn, 5½ in. Weight 1½ lbs.
6/6 Post 6d.

No. 2 Length, including horn, 7½ in. Weight 4 lbs.
8/6 Post 1/-

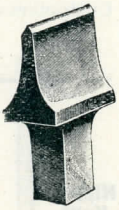
No. 3. Length, including horn, 9 in. Weight 6 lbs.
12/6 Post 1/-

No. 5. Length, including horn, 11 in. Weight 10 lbs.
18/- Rail.



Smith's Anvils.
Best Quality.
London Pattern.
British made.

These Smith's Anvils are of the very best wrought quality, made in only 2 pieces, top and bottom with a weld in the centre. It is practically impossible for the bick or end to break off. Cheaper anvils are of steel casting in one piece.



Smith's Hardies.

12, 14 or 16 lbs.	20 to 50 lbs.	50 to 56 lbs.	57 to 70 lbs.	71 to 83 lbs.	84 to 139 lbs.
24/- ea.	**37/6** ea.	**45/-** ea.	**75/-** cwt.	**72/-** cwt.	**67/-** cwt.

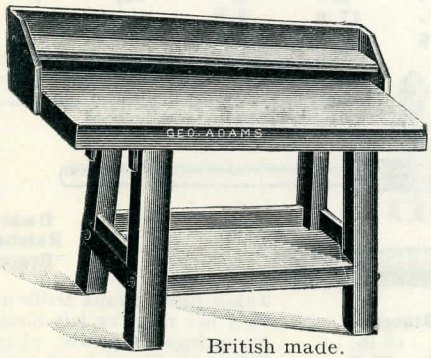
1¼ cwt. to 4¼ cwt. **64/-** cwt.

Smith's Hardies. **1/-** lb.

Anvil Stands and Swage Blocks, prices on application.

We also carry in stock a complete range of all Smith's Tools separately and also in sets in chests. Prices for these on application.

BENCHES



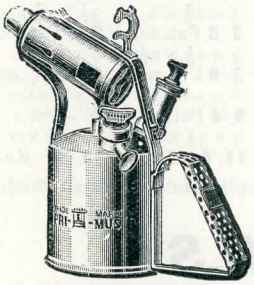
British made.

No. 6 Engineer's or Motorist's Bench.

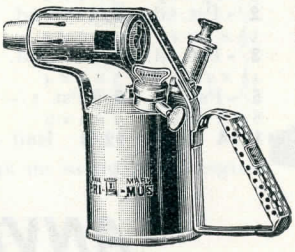
This is a strong bench at which one can work in comfort. All tools are get-at-able when wanted. It is made of Quebec birch. The top is 3 in. thick, the legs 3 in. square are morticed into the top, they have struts between them which are bolted up. A tray is fitted between the legs as a receptacle for tools and sundries not in use. A 9 in. high tool rack is built on the top of the bench for handled tools, such as files and so forth. In front of the rack is a useful shelf 3 in. wide. The bench with rack is 18½ in. wide and 31 in. high from floor to top of bench.

5 ft. long **£4 15 0** 6 ft. long **£5 10 0** Rail.

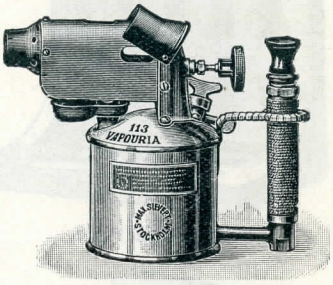
PARAFFIN BLOW LAMPS



Aetna Blow Lamps.
Inclined Burner.
631 $\frac{5}{8}$ pint, weight $1\frac{1}{2}$ lbs. **11/-**
632 1 pint, weight $2\frac{1}{4}$ lbs. **13/-**
633 2 pints, weight $2\frac{3}{4}$ lbs. **15/-**
Post 9d.



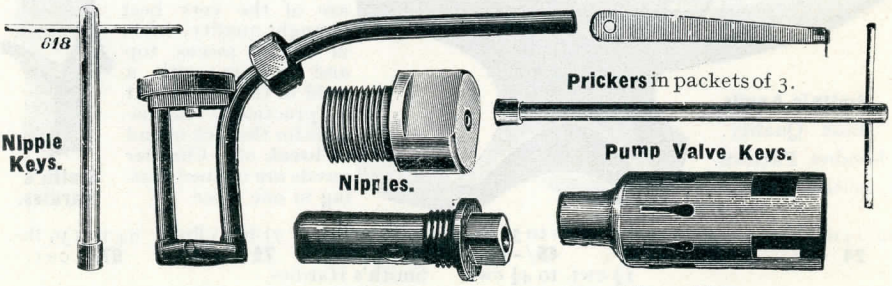
Aetna Blow Lamps.
Horizontal Burner.
636 1 pint, weight $2\frac{1}{4}$ lbs., height $7\frac{1}{4}$ in. **13/-**
Post 9d.



Vapouria Blow Lamps.
3 $1\frac{1}{3}$ pints, burns 1 hour, weight 3 lbs. **36/-**
Post 9d.
4 2 pints, burns 1 hour, weight $4\frac{1}{4}$ lbs. **46/6**
Post 9d.

SPARE PARTS for BLOW LAMPS

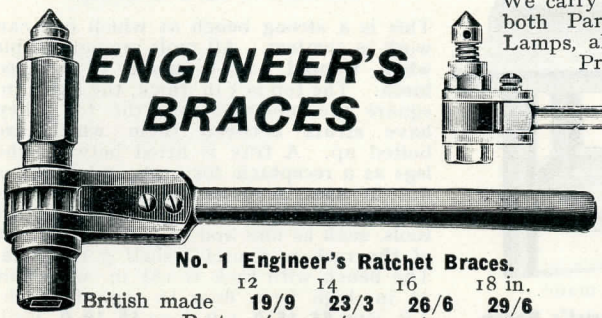
Customers are advised to give carefully exact details and to quote the list number of the lamp for which the spare parts are required.



For Lamp	Nipples, each.	Nipples, doz.	Prickers, per pkt.	Prickers, doz. pkts.	Nipple Keys.	Burners.	Flame Tubes.	Pump Valves.	Pump Valve Keys.
631	**2d.**	**1/6**	**2d.**	**1/6**	**1/-**	**4/-**	**1/6**	**5d.**	**1/-**
632/636	**2½d.**	**2/3**	**2d.**	**1/6**	**1/-**	**5/-**	**2/-**	**5d.**	**1/-**
Vap 3	**3d.**	**2/9**	**3d.**	**2/-**	**1/-**	**17/6**	**3/9**	—	—
4	**5d.**	**4/6**	**3d.**	**2/-**	**1/6**	**17/-**	**4/9**	—	—

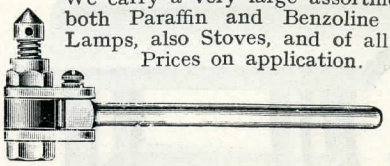
We carry a very large assortment of both Paraffin and Benzoline Blow Lamps, also Stoves, and of all sizes. Prices on application.

ENGINEER'S BRACES



No. 1 Engineer's Ratchet Braces.

	12	14	16	18 in.
British made	**19/9**	**23/3**	**26/6**	**29/6**
Post	1/-	1/3	1/3	1/3

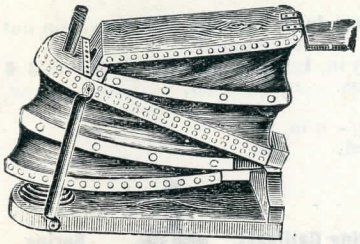


Dwarf Ratchet Brace.

Takes Brace Shank Drills up to ½ in., right or left hand. No springs nor pawls. $7\frac{1}{4}$ in. long. Depth of head 3 in. British made. **10/6** Post 1/-

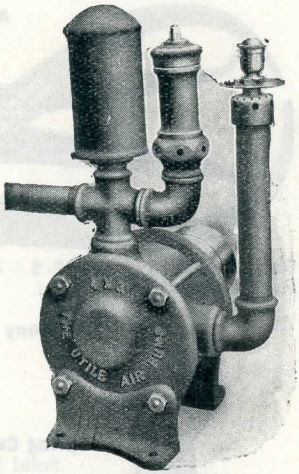
Bellows, Blowers, Blow Pipes and Bunsen Burners

ALL BRITISH MADE.

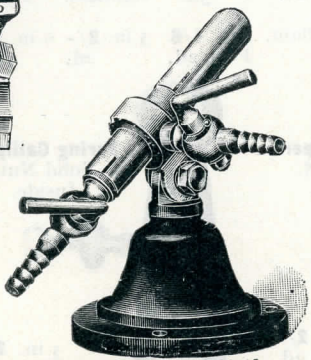


Double Blast Foot Bellows.
Best quality.

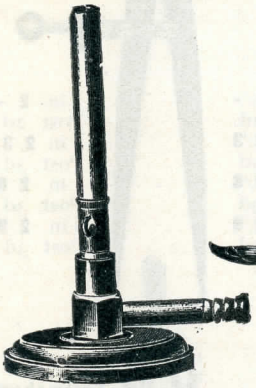
6	8	10	12	14
24/-	**27/-**	**31/6**	**36/-**	**43/6**



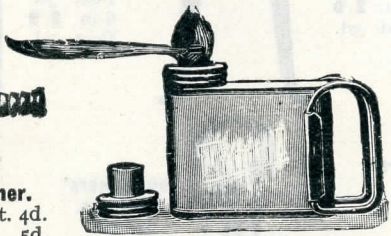
Utile Power Blowers.
No. 1 1,000 revs. p.m., 900 cubic feet per hour. Inlet and outlet ½ in. gas. Pulleys 3 × 1 in. Takes ⅙ h.p. Weight 23 lb. **£4 10 0** F.O.R.
No. 2 1,000 revs. p.m., 1,200 cubic feet per hour. Inlet and outlet ¾ in. gas. Pulleys 3 × 1 in. Takes ¼ h.p. Weight 27 lb. **£5 18 9** F.O.R.



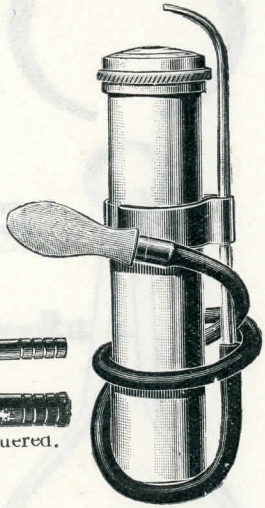
No. 2440A Dentist's Bench Blow Pipe.
¾ in. barrel **17/3**
Post 9d.



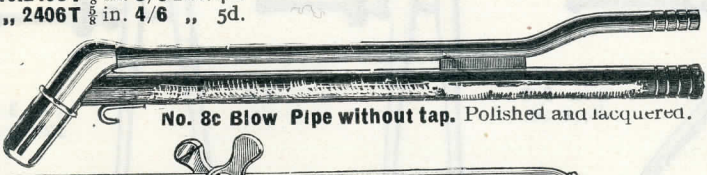
Plain Bunsen Burner.
No. 2405 ⅜ in. **1/6** Pst. 4d.
„ 2406 ⅝ in. **3/-** „ 5d.
With Gas tap.
No. 2405T ⅜ in. **3/9** Pst. 4d.
„ 2406T ⅝ in. **4/6** „ 5d.



Pocket Automatic Blow Lamp.
for Methylated Spirit **2/3** Pt. 3d.



Brass Spirit Soldering Lamps.
No. 2 4½ in. long, 1 in. diam.
2/3 Post 3d.
No. 4 5½ in. long, 1½ in. diam., double top
3/9 Post 4d.



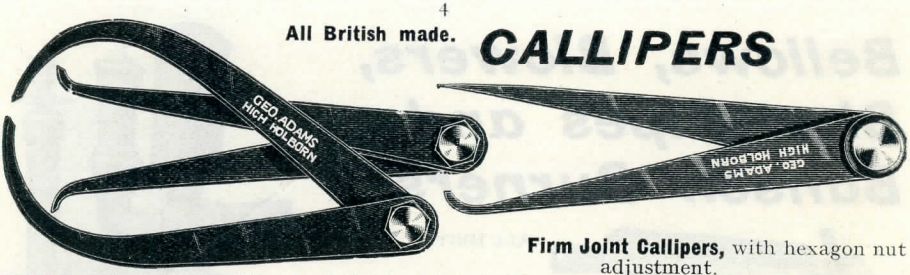
No. 8c Blow Pipe without tap. Polished and lacquered.

No. 8c Blow Pipe with tap. Polished and Lacquered.

For gas pipe	⅜	½	¾ in.
Length	10¼	12½	19 in.
No. 8c. without tap	**10/-**	**13/6**	**32/6**
No. 8c. with tap	**19/6**	**25/-**	**45/-**
	Post 6d.	6d.	9d.

All British made.

CALLIPERS

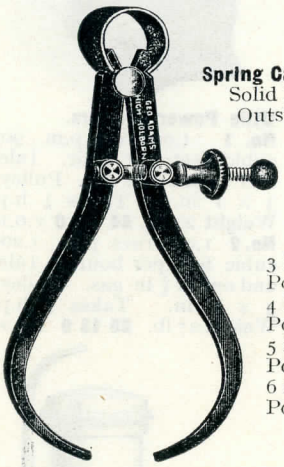


Firm Joint Callipers, with hexagon nut adjustment.

Outside 3 in. **1/9** 4 in. **2/3** 5 in. **2/9** 6 in. **3/6**
Rustless. Post 2d. 2d. 2d. 3d.

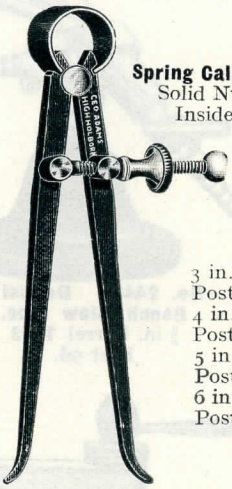
Inside 3 in. **1/9** 4 in. **2/3** 5 in. **2/9** 6 in. **3/6**
Rustless. 2d. 2d. 2d. 3d.

Jenny Plain. 4 in. **1/6** 5 in. **2/-** 6 in. **2/3**
Post 2d. 2d. 3d.



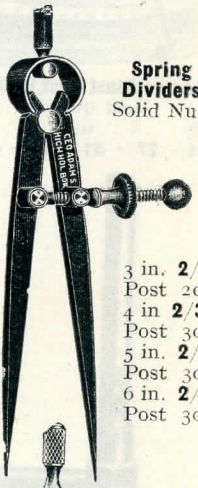
Spring Callipers.
Solid Nut.
Outside.

3 in. **2/-**
Post 2d.
4 in. **2/3**
Post 3d.
5 in. **2/6**
Post 3d.
6 in. **2/9**
Post 3d.



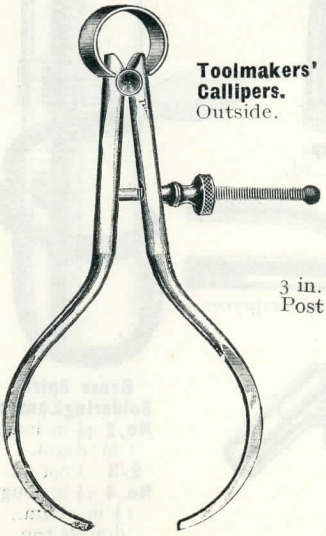
Spring Callipers.
Solid Nut.
Inside.

3 in. **2/-**
Post 2d.
4 in. **2/3**
Post 3d.
5 in. **2/6**
Post 3d.
6 in. **2/9**
Post 3d.



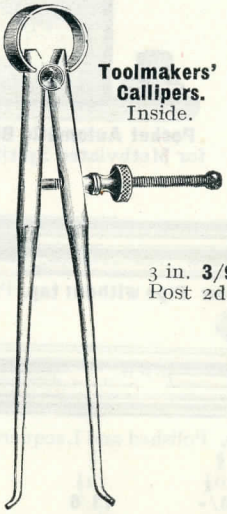
Spring Dividers.
Solid Nut.

3 in. **2/-**
Post 2d.
4 in **2/3.**
Post 3d.
5 in. **2/6**
Post 3d.
6 in. **2/9**
Post 3d.



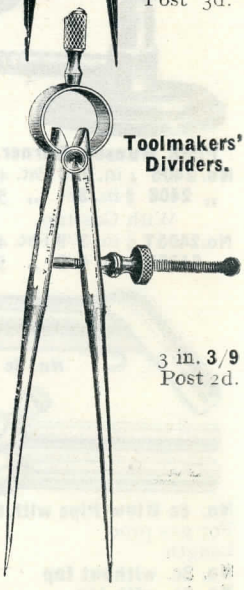
Toolmakers' Callipers.
Outside.

3 in. **3/9**
Post 2d.



Toolmakers' Callipers.
Inside.

3 in. **3/9**
Post 2d.

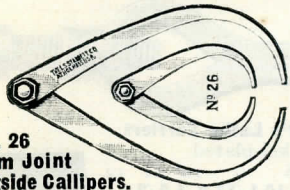


Toolmakers' Dividers.

3 in. **3/9**
Post 2d.

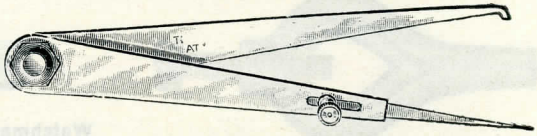
Set of 3 Toolmakers' 3 in. Inside, Outside Callipers and Dividers, in leather case, **12/6** Post 3d.

STARRETTS CALLIPERS



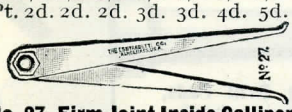
No. 26
Firm Joint
Outside Callipers.

3	4	5	6	8	10	12 in.
2/3	**2/9**	**3/3**	**3/6**	**4/6**	**5/-**	**5/6**
Pt. 2d.	2d.	2d.	3d.	3d.	4d.	5d.



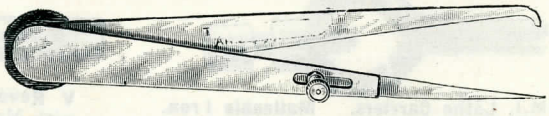
No. 41 Firm Joint Jenny Callipers.

4 in.	6 in.	8 in.	10 in.
3/9	**4/6**	**5/6**	**6/6**
Post 2d.	3d.	3d.	4d.



No. 27 Firm Joint Inside Callipers.

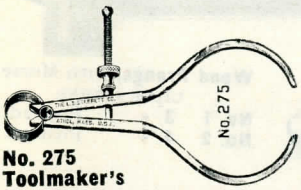
3	4	5	6	8	10	12 in.
2/3	**2/9**	**3/3**	**3/6**	**4/6**	**5/-**	**5/6**
Pt. 2d.	2d.	2d.	3d.	3d.	4d.	5d.



No. 42 Jenny Callipers, Lock Joint. Fine adjustment.

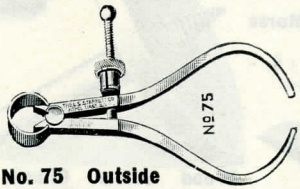
4 in.	6 in.	8 in.	10 in.
5/6	**6/6**	**7/6**	**9/-**
Post 2d.	3d.	3d.	4d

SPRING CALLIPERS



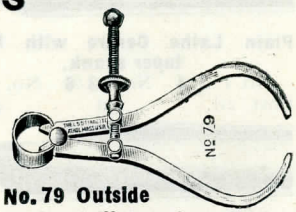
No. 275
Toolmaker's
Outside Spring Callipers.

2	3	4	5	6 in.
5/6	**6/9**	**8/-**	**8/-**	**9/6**
Pt. 2d.	2d.	3d.	3d.	3d.



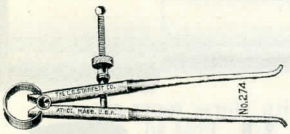
No. 75 Outside
Spring Callipers with spring nut.

2½	3	4	5	6	8 in.
6/6	**6/6**	**6/9**	**6/9**	**8/3**	**9/6**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.



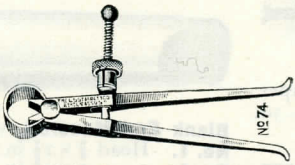
No. 79 Outside
Spring Callipers with solid nut.

2½	3	4	5	6	8 in.
3/9	**3/9**	**4/-**	**4/6**	**4/9**	**5/6**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.



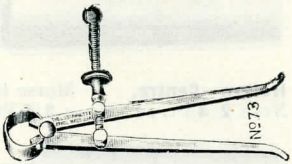
No. 274. Toolmaker's Inside
Spring Callipers.

2	3	4	5	6 in.
5/6	**6/9**	**8/-**	**8/-**	**9/6**
Pt. 2d.	2d.	3d.	3d.	3d.



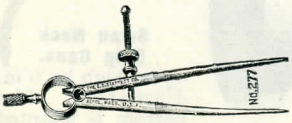
No. 74 Inside Spring Callipers
with spring nut.

2½	3	4	5	6	8 in.
6/6	**6/6**	**6/9**	**6/9**	**8/3**	**9/6**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.



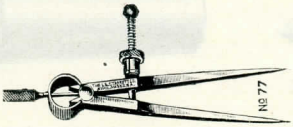
No. 73 Inside Spring Callipers
with solid nut.

2½	3	4	5	6	8 in.
3/9	**3/9**	**4/-**	**4/6**	**4/9**	**5/6**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.



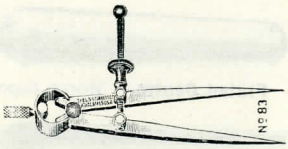
No. 277 Tool Maker's Spring
Dividers.

2	3	4	5	6 in.
5/6	**6/9**	**8/-**	**8/-**	**9/6**
Pt. 2d.	2d.	3d.	3d.	3d.



No. 77 Spring Dividers
with spring nut.

2½	3	4	5	6	8 in.
6/6	**6/6**	**7/9**	**7/9**	**9/6**	**11/-**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.

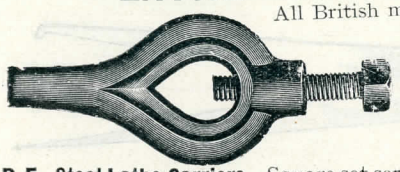


No. 83 Spring Divider
with solid nut.

2½	3	4	5	6	8 in.
3/9	**3/9**	**4/-**	**4/6**	**4/9**	**6/3**
Pt. 2d.	2d.	3d.	3d.	3d.	4d.

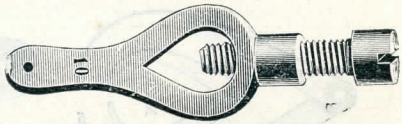
LATHE CARRIERS AND CENTRES

All British made except Watchmaker's.



D.F. Steel Lathe Carriers. Square set screw.

½ in.	**10d.**	¾ **1/-**	1 **1/6**	1¼ **2/3**	1½ **3/-**
Post	2d.	3d.	4d.	6d.	5d.

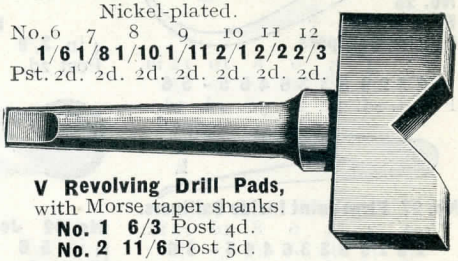


Watchmaker's Lathe Carriers.
Nickel-plated.

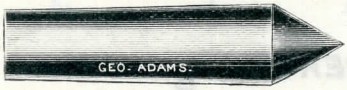
No.	6	7	8	9	10	11	12
	1/6	**1/8**	**1/10**	**1/11**	**2/1**	**2/2**	**2/3**
Pst.	2d.	2d.	2d.	2d.	2d.	2d.	2d.

M.I. Lathe Carriers. Malleable Iron.

½ in.	**1/-**	¾ **1/3**	1 **1/6**	1¼ **2/-**	1½ **2/6**
Post	3d.	4d.	4d.	6d.	9d.

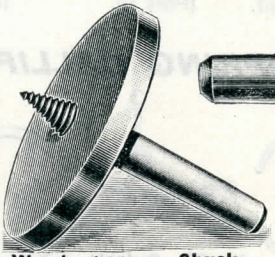


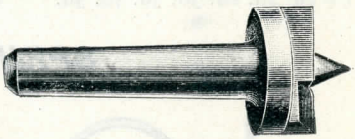
V Revolving Drill Pads,
with Morse taper shanks.
No. 1 6/3 Post 4d.
No. 2 11/6 Post 5d.



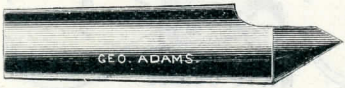
Plain Lathe Centre with Morse taper shank.

No. 1	**2/4**	No. 2 **3/6**	No. 3 **6/-**
Post	2d.	3d.	4d.



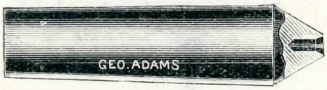


Wood Prongs, with Morse taper shanks.
No. 1 3/- Post 2d.
No. 2 4/- Post 3d.

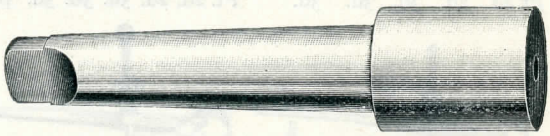


Half Plain Centre. Morse taper.
No. 1 **2/4** Pt. 2d. No. 2 **3/8** Pt. 3d.

Wood Screw Chuck,
with Morse taper shank.
No. 1 3/- Post 4d.
No. 2 8/- Post 5d.



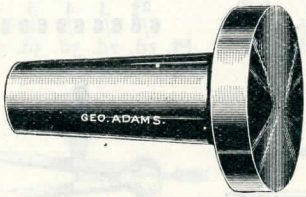
Hollow Centre. Morse taper.
No. 1 **2/4** Pt. 2d. No. 2 **3/6** Pt. 3d.



Blank End Mandrels, with Morse taper shanks.

No. 1.	Head ¾ × 1⅛ in.	**2/6**	Post	3d.
No. 1.	,, 1 × 1⅝ in.	**3/-**	,,	4d.
No. 2.	,, 1¼ × 2 in.	**3/6**	,,	5d.

Half Hollow Centre. Morse taper.
No. 1 **2/4** Pt. 2d. No. 2 **3/8** Pt. 3d.



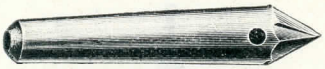
Plain Drill Pads,
Morse taper shanks.

No. 1	**4/-**	**No. 2**	**5/6**
Post	4d.		5d.

With V groove.

No. 1	**3/9**	**No. 2**	**6/10**
Post	4d.		5d.

Swan Neck Drip Cans.
6½ in. high by 6 in. diameter. The bottom is adapted to rest on top of a piece of bar. The nose is a length of flexible tube which remains in any position desired.
4/6 Post 9d.



Fluted Centre. Morse taper.

Square Centre. Morse taper.
Fluted or Square Centres.
No. 1. **3/8** Pt. 2d. No. 2 **4/6** Pt. 3d.

CABINETS For Gauges

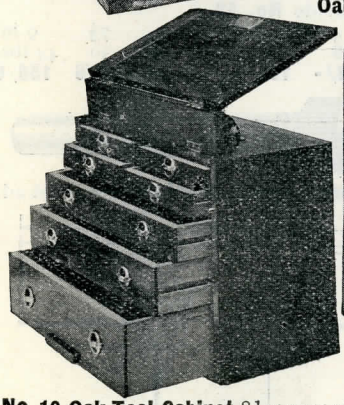
British made

No. 2
Oak Tool Cabinet.

No. 2 Cabinet 8 × 10½ × 16½ in. Nicely polished, English lock **50/-**

No. 12 Cabinet 16½ × 8 × 12 in. Drawers lined, solid oak, 2 lever locks **62/-**

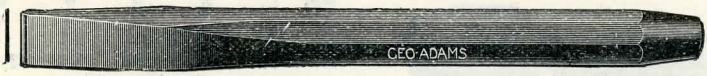
No. 12
Oak Tool Cabinet.



No. 10 Oak Tool Cabinet 8¼ × 12 × 16½ in., lined drawers **60/-**

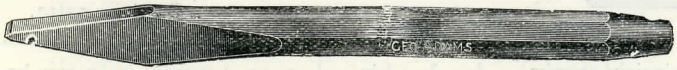
No. 1 Oak Tool Cabinet 8 × 10½ × 16½ in. Five drawers lined feltette, dull finish **45/-**

CHISELS, METAL



No. 1 Flat Chipping Chisels. Octagon Shank. British made.

Length	4	5	6	8	8	8	10	12	12	18	18 in.
Diam.	¼	5/16	½	½	⅝	¾	⅜	½	⅝	½	¾ in.
Each	**4d.**	**5d.**	**7d.**	**8d.**	**10d.**	**1/1**	**7d.**	**10d.**	**1/-**	**1/2**	**1/7**
Post	2d.	2d.	2d.	4d.	5d.	6d.	3d.	5d.	6d.	6d.	6d.



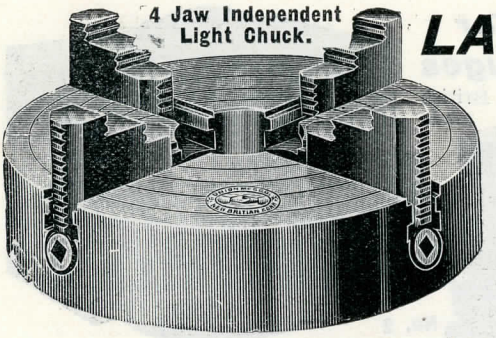
No. 2 Cross Cut Chisels. Octagon Shank. British made.

4 × ¼ in., **4d.** Post 2d. 5 × 5/16 in., **5d.** Post 2d. 6 × ⅜ in., **6d.** Post 2d.

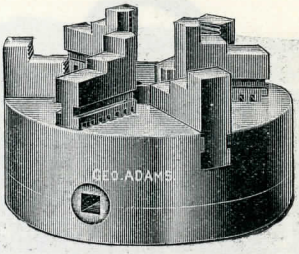
No. 4 Half-Round Chisels. Octagon Shank. British made.

4 × ¼ in., **4d.** Post 2d. 5 × 5/16 in., **5d.** Post 2d. 6 × ⅜ in., **6d.** Post 2d.

LATHE CHUCKS



4 Jaw Independent Light Chuck.



4 Jaw Independent Chuck, Reversible Jaws.

American **No. 27**	3	4	5	6 in.
Weight	2½	4½	6½	9 lbs.
	54/6	**62/6**	**71/-**	**83/6**
Post	9d.	9d.	1/-	1/3
British make **No. 54**	4		5	6 in.
Weight	5½		8	11¾ lbs.
	62/6		**71/-**	**83/6**

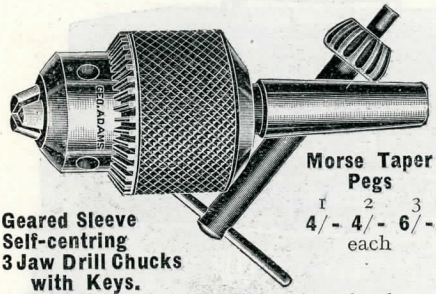
3 Jaw Self-centring Scroll Chucks. 3 pinions, 2 sets of jaws and key.

No. 43 Continental.

Size	2¾	3¼	4¼	5¼	6¼	7½	9 in.
Wgt.	2¾	4¼	8½	11	17	22	36 lbs.
	34/-	**38/-**	**40/-**	**51/-**	**57/-**	**80/-**	**100/-**
Post	9d.	9d.	1/3	rail	rail	rail	rail

British made **No. 58.**

Size	4	5.	6	7½	9 in.
Weight	8	11	18	30	44 lbs.
	92/-	**100/-**	**117/-**	**133/6**	**158/6**



Morse Taper Pegs

1	2	3
4/-	**4/-**	**6/-**

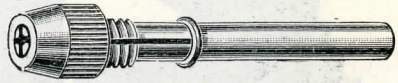
each

Geared Sleeve Self-centring 3 Jaw Drill Chucks with Keys.

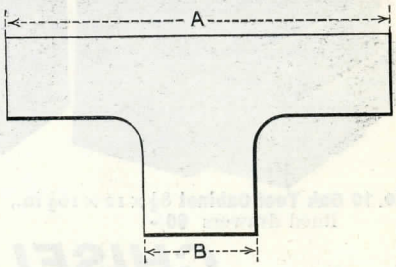
Jacob. American, without taper shanks.

No.	**1**	**7**	**30**	**32**	**34**	**36**
takes to	3/16	1/4	5/16	3/8	1/2	3/4 in.
	23/-	**23/-**	**28/9**	**28/9**	**46/-**	**60/-**
Post	3d.	4d.	6d.	6d.	9d.	1/-

Modern. Continental made, without taper shank. ¼ in. **13/-** ⅜ in. **16/6** ½ in. **21/3**
Post 4d. 6d. 9d.



No. 0 Pioneer Spring Chucks 1/- ea. Post 2d.



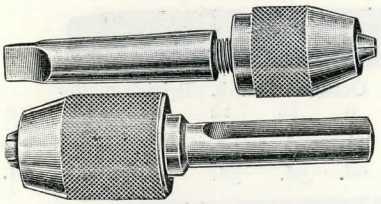
Chuck Back Castings.

No.	**1**	**2**	**3**	**4**	**5**	**6**
A	2½	2¾	3⅛	4	5	6 in.
B	1¼	1½	1½	1¾	1¾	1¾ ,,
Each	**6d.**	**8d.**	**10d.**	**1/8**	**3/5**	**3/6**

Carriage extra.

No.	**7**	**8**	**9**	**10**	**11**	**12**
A	3½	4	5	5¼	6¾	7 in.
B	2¼	2½	2½	2½	2⅝	2⅝ ,,
	2/-	**2/8**	**3/6**	**4/-**	**5/4**	**6/6**

Carriage extra.

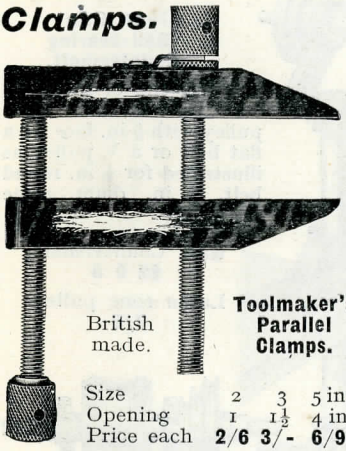


3 Jaw Self-centring Drill Chucks.
Goodell type.

With ½ in. straight shanks.	¼	⅜	½ in.
Continental	**2/6**	**3/-**	**3/3**
Do. do. British made	**3/3**	**3/6**	**4/-**
No. 1 Morse taper.			
Continental	**2/9**	**3/3**	**3/6**
Do. do British made	**3/6**	**4/-**	**4/3**
Post	4d.	5d.	6d.

3 or 4 Jaw Chucks can be supplied fitted to lathes if the lathe spindle is sent to us. Cost of fitting, including back plate for chucks up to 4 in. diam.
£1 0 0
Above 4 in. at the rate of **5/-** per in. diam.

Toolmaker's Clamps.



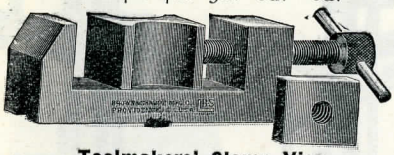
British made.

Toolmaker's Parallel Clamps.

Size	2	3	5 in.
Opening	1	$1\frac{1}{2}$	4 in.
Price each	**2/6**	**3/-**	**6/9**

Starretts No. 161 in pairs.

Size	AA	A	B	C	D
Open	$\frac{3}{4}$	$1\frac{1}{4}$	$1\frac{3}{4}$	$2\frac{1}{4}$	$2\frac{3}{4}$ in.
Per pair	**6/9**	**8/-**	**9/5**	**11/6**	**12/4**
Post	4d.	4d.	5d.	6d.	6d.

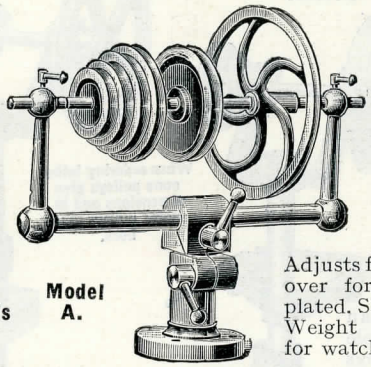


Toolmakers' Clamp Vice.

753. Opening 2 in. Each **8/-** Post 4d.

752. As 753, but heavier, with groove in base. Each **19/-** Post 6d.

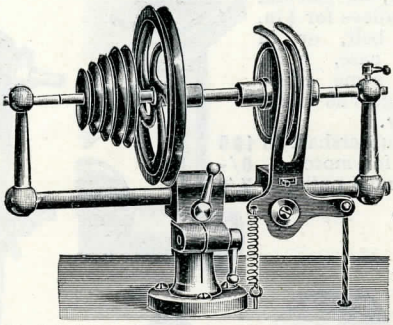
Bench Countershafts for Motor Drives.



Model A.

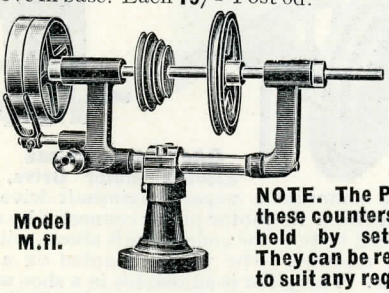
Model A. Size of large single groove pulley $4\frac{1}{4}$ in. 4 speed cone. Height to spindle 7 in. Total width 11 in.

Adjusts for height and swings over for tension. Nickel-plated. Spindle diam. 8 m/m. Weight $4\frac{1}{2}$ lbs. Suitable for watchmakers' lathes and similar small apparatus taking about $\frac{1}{16}$ h.p. **27/-**



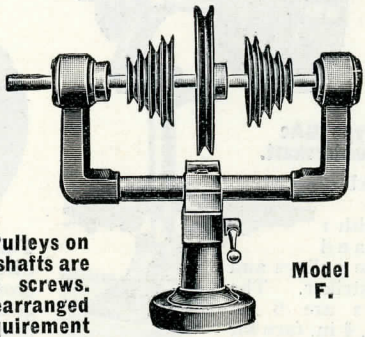
Model AM1. Bench Countershaft. 42/-

Model AM1. As **A** above, but with fast and loose pulleys $2\frac{3}{8}$ in. diam. and belt striker for round belt. Weight $5\frac{1}{2}$ lbs.



Model M.fl.

NOTE. The Pulleys on these countershafts are held by set screws. They can be rearranged to suit any requirement



Model F.

Model F.fl. as model **F** alongside with the addition of 5 in. fast and loose pulleys for $\frac{3}{4}$ in. flat belt and belt striker. All self contained.

80/-

Model M.fl. as model **M** alongside with the addition of 6 in. fast and loose pulleys for $\frac{3}{4}$ in. flat belt and belt striker. All self contained.

84/-

Model F. Ball bearings. $10\frac{1}{2}$ in. wide. 7 in. high to spindle, raises up to 9 in. Diam. of large single groove pulley is 4 in. Weight 8 lbs. Spindle 10 m/m diam. Swings over for tension. Suitable for apparatus taking up to about $\frac{1}{8}$ h.p.

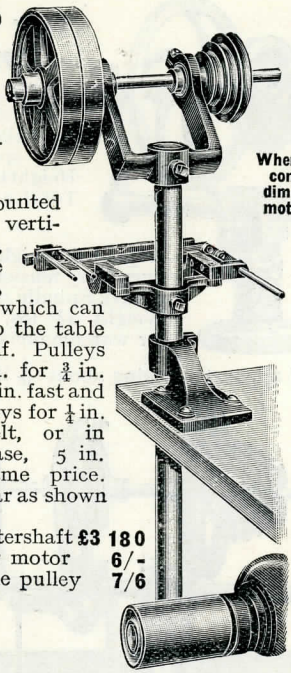
55/-

Model M. Plain bearings 13 in. wide, 10 in. high to spindle. Diam. of large single groove pulley $6\frac{1}{2}$ in. Weight 16 lbs. Raises up for height and swings over for tension. Suitable for about $\frac{1}{4}$ h.p. Spindle 15 m/m. **58/6**

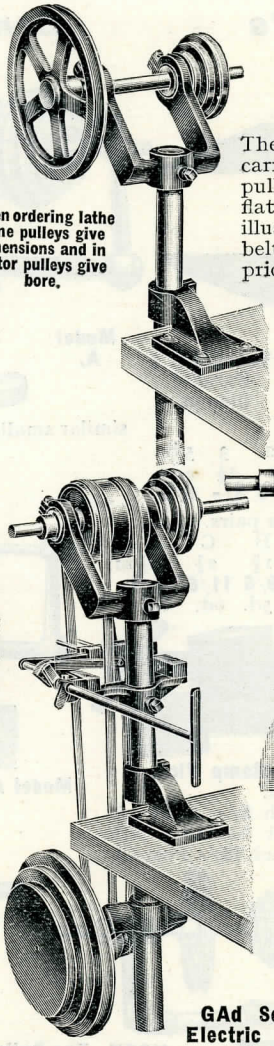
Self-contained Countershafts for Electric Motor Drives.

Type GAb fast and loose pulleys and striker. This ball-bearing countershaft is mounted on a 2 ft. vertical pillar, adjustable for height, in a shoe which can be fixed to the table or to a shelf. Pulleys 6 in. diam. for ¾ in. flat belt, 6in. fast and loose pulleys for ¼ in. round belt, or in either case, 5 in. diam., same price. Striker gear as shown midway.

GAb Countershaft **£3 18 0**
Pulley for motor **6/-**
Lathe cone pulley **7/6**



When ordering lathe cone pulleys give dimensions and in motor pulleys give bore.

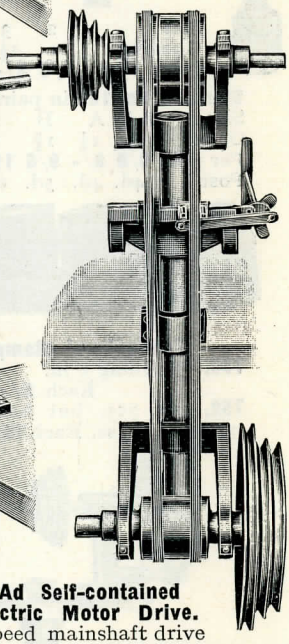


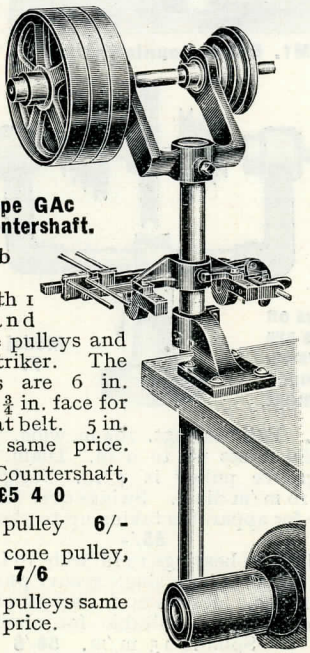
Type GAa Ball-bearing Countershaft.

The left end of the shaft carries a 6 in. diam. fixed pulley with ¾ in. face for a flat belt or a V pulley as illustrated for ¼ in. round belt. 5 in. diam. same price.

GAa Countershaft, **£2 0 0**

Lathe cone pulley. **7/6**





Type GAc Countershaft.

As GAb above but with 1 fast and 2 loose pulleys and belt striker. The pulleys are 6 in. diam., ¾ in. face for ½ in. flat belt. 5 in. diam. same price.

GAc Countershaft, **£5 4 0**

Motor pulley **6/-**

Lathe cone pulley, **7/6**

¼ in. V pulleys same price.

GAd Self-contained Electric Motor Drive.

This comprises a 3-speed mainshaft drive direct from the motor pulley connected by open and crossed belts to the countershaft above, with striker gear midway. The whole mounted on a vertical pillar. This pillar is adjustable in a shoe which can be fixed to the table or to a shelf. Ball bearings throughout. The countershaft above has one fast and two loose 3 in. pulleys for ½ in. belt. The lower shaft has 2 in. treble width plain pulley and a cone pulley with steps 7, 6 and 5 in. We also supply for the motor a three-step pulley 3¾, 2¾ and 1¾ in. With the motor at 1,450 revs. one can obtain 120 revs. forward and reverse for screw cutting and all intermediate speeds up to 1,400 revs. for turning and boring small diameters.

GAd 3-speed drive with motor pulley **£7 5 0**
Lathe pulley extra **7/6**

TWIST DRILLS all British made

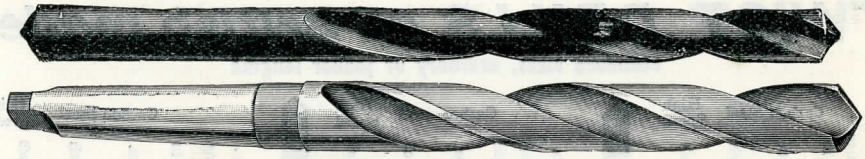
Standard sizes, ordinary or jobber lengths

in.	Gauge	m/m	Carbon Steel doz.	Carbon Steel each	High Speed each
—	80	—	2/-	3d.	—
—	79	—	2/-	3d.	—
1/64	—	—	—	—	—
—	78	—	2/-	3d.	—
—	77	—	2/-	3d.	—
—	—	½	2/-	3d.	—
—	76	—	2/-	3d.	—
—	75	—	2/-	3d.	—
—	74	—	2/-	3d.	—
—	73	—	2/-	3d.	—
—	72	—	2/-	3d.	—
—	71	—	2/-	3d.	—
—	70	—	2/-	3d.	—
—	69	—	2/-	3d.	—
—	68	—	2/-	3d.	—
1/32	—	—	2/-	3d.	—
—	67	—	2/-	3d.	—
—	66	—	2/-	3d.	—
—	65	—	2/-	3d.	—
—	64	—	2/-	3d.	—
—	63	—	2/-	3d.	—
—	62	—	2/-	3d.	—
—	61	—	2/-	3d.	—
—	—	1	2/-	3d.	—
—	60	—	2/3	3d.	6d.
—	59	—	2/3	3d.	6d.
—	58	—	2/3	3d.	6d.
—	57	—	2/3	3d.	6d.
—	56	—	2/3	3d.	6d.
3/64	—	—	2/3	3d.	6d.
—	55	—	2/3	3d.	6d.
—	54	—	2/3	3d.	6d.
—	—	1½	2/3	3d.	6d.
—	53	—	2/3	3d.	6d.
1/16	—	—	2/3	3d.	6d.
—	52	—	2/3	3d.	6d.
—	51	—	2/3	3d.	6d.
—	50	—	2/4	3d.	6d.
—	49	—	2/4	3d.	6d.
—	48	—	2/4	3d.	7d.
5/64	—	—	2/4	3d.	7d.
—	47	—	2/4	3d.	7d.
—	—	2	2/4	3d.	7d.
—	46	—	2/4	3d.	7d.
—	45	—	2/4	3d.	7d.
—	44	—	2/4	3d.	7d.
—	43	—	2/4	3d.	7d.
—	42	—	2/4	3d.	7d.
3/32	—	—	2/4	3d.	7d.
—	41	—	2/4	3d.	7d.
—	40	—	2/5	3d.	7d.
—	—	2½	2/5	3d.	7d.
—	39	—	2/5	3d.	7d.
—	38	—	2/5	3d.	7d.
—	37	—	2/5	3d.	7d.

in.	Gauge	m/m	Carbon Steel doz.	Carbon Steel each	High Speed each
—	36	—	2/6	3d.	7d.
7/64	—	—	2/6	3d.	7d.
—	35	—	2/6	3d.	7d.
—	34	—	2/6	3d.	7d.
—	33	—	2/6	3d.	7d.
—	32	—	2/6	3d.	8d.
—	—	3	2/6	3d.	8d.
—	31	—	2/6	3d.	8d.
⅛	—	—	2/6	3d.	8d.
—	30	—	2/6	3d.	8d.
—	29	—	2/6	3d.	8d.
—	—	3½	2/6	3d.	8d.
—	28	—	2/6	3d.	8d.
9/64	—	—	2/6	3d.	8d.
—	27	—	2/6	3d.	8d.
—	26	—	2/6	3d.	8d.
—	25	—	2/9	3½d.	8d.
—	24	—	2/9	3½d.	9d.
—	23	—	2/9	3½d.	9d.
5/32	—	—	2/9	3½d.	9d.
—	22	—	2/9	3½d.	9d.
—	—	4	2/9	3½d.	9d.
—	21	—	2/9	3½d.	9d.
—	20	—	3/-	3½d.	9d.
—	19	—	3/-	3½d.	9d.
—	18	—	3/-	3½d.	9d.
11/64	—	—	3/3	3½d.	9d.
—	17	—	3/3	3½d.	9d.
—	16	—	3/3	3½d.	10d.
—	—	4½	3/3	3½d.	10d.
—	15	—	3/6	4d.	10d.
—	14	—	3/6	4d.	10d.
—	13	—	3/6	4d.	10d.
3/16	—	—	3/6	4d.	10d.
—	12	—	3/6	4d.	10d.
—	11	—	3/6	4d.	10d.
—	10	—	3/6	4d.	10d.
—	9	—	3/6	4d.	10d.
—	—	5	3/6	4d.	10d.
—	8	—	3/6	4d.	10d.
—	7	—	3/6	4d.	10d.
13/64	—	—	3/9	4½d.	11d.
—	6	—	3/9	4½d.	11d.
—	5	—	3/9	4½d.	11d.
—	4	—	3/9	4½d.	11d.
—	3	—	3/9	4½d.	11d.
—	—	5½	3/9	4½d.	11d.
7/32	—	—	4/-	4½d.	11d.
—	2	—	4/-	4½d.	11d.
—	1	—	4/-	4½d.	1/-
—	A	—	4/-	4½d.	1/-
15/64	—	—	4/3	5d.	1/-
—	—	6	4/3	5d.	1/1
—	B	—	4/3	5d.	1/1
—	C	—	4/3	5d.	1/1

in.	Gauge	m/m	Carbon Steel doz.	Carbon Steel each	High Speed each
—	D	—	4/6	5d.	1/1
¼	E	—	4/6	5d.	1/1
—	—	6½	4/9	5d.	1/1
—	F	—	5/-	5½d.	1/1
—	G	—	5/-	5½d.	1/2
17/64	—	—	5/3	6d.	1/2
—	H	—	5/4	6d.	1/2
—	I	—	5/4	6d.	1/2
—	—	7	5/4	6d.	1/3
—	J	—	5/4	6d.	1/3
—	K	—	5/4	6d.	1/3
9/32	—	—	5/4	6d.	1/3
—	L	—	5/6	6½d.	1/4
—	M	—	5/6	6½d.	1/4
—	—	7½	5/6	6½d.	1/4
19/64	—	—	5/6	6½d.	1/4
—	N	—	6/-	7d.	1/6
5/16	—	—	6/-	7d.	1/6
—	—	8	6/-	7d.	1/6
—	O	—	6/6	7½d.	1/6
—	P	—	6/6	7½d.	1/6
21/64	—	—	6/6	7½d.	1/7
—	Q	—	6/9	7½d.	1/7
—	—	8½	6/9	7½d.	1/7
—	R	—	6/9	7½d.	1/7
11/32	—	—	6/9	8d.	1/8
—	S	—	7/-	8d.	1/8
—	—	9	7/3	8d.	1/10
—	T	—	7/3	8d.	1/10
23/64	—	—	7/3	9d.	1/10
—	U	—	7/6	9d.	1/10
—	—	9½	7/9	9d.	1/11
⅜	—	—	8/-	9d.	1/11
—	V	—	8/-	9d.	1/11
—	W	—	8/3	10d.	2/-
25/64	—	—	8/6	10d.	2/-
—	—	10	8/6	10d.	2/-
—	X	—	8/9	10d.	2/-
—	Y	—	9/-	11d.	2/2
13/32	—	—	9/3	11d.	2/2
—	Z	—	9/3	11d.	2/2
—	—	10½	9/6	11d.	2/2
27/64	—	—	9/9	1/-	2/3
—	—	11	10/-	1/-	2/3
7/16	—	—	11/-	1/1	2/3
—	—	11½	11/6	1/1	2/4
29/64	—	—	11/9	1/2	2/4
15/32	—	—	13/-	1/3	2/6
—	—	12	14/-	1/4	2/6
31/64	—	—	15/-	1/5	2/7
—	—	12½	15/-	1/5	2/7
½	—	—	16/-	1/6	2/9
—	—	13	16/-	1/6	2/9

Please specify British made when ordering as we carry all these twist drills in best American makes as well.



TWIST DRILLS *all British made*

Extra Long and **Taper Shank** same price each.

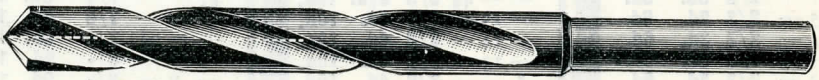
Diameter	1/8	9/64	5/32	11/64	3/16	13/64	7/32	15/64	1/4	17/64	9/32	19/64	5/16	21/64	11/32	in.
Length	5 1/8	5 1/4	5 3/8	5 1/2	5 3/4	5 7/8	6	6 1/8	6 1/8	6 1/4	6 1/4	6 3/8	6 3/8	6 1/2	6 1/2	in.
Carbon	**11d.**	**1/-**	**1/-**	**1/1**	**1/1**	**1/2**	**1/2**	**1/3**	**1/3**	**1/4**	**1/4**	**1/4**	**1/4**	**1/6**	**1/6**	
High Speed	**2/6**	**2/6**	**2/6**	**2/6**	**2/7**	**2/7**	**2/7**	**2/7**	**2/9**	**2/10**	**2/10**	**2/10**	**2/10**	**2/11**	**2/11**	

Diameter	23/64	3/8	25/64	13/32	27/64	7/16	29/64	15/32	31/64	1/2	33/64	17/32	35/64	9/16	37/64	in.
Length	6 3/4	6 3/4	7	7	7 1/4	7 1/4	7 1/2	7 1/2	7 3/4	7 3/4	8	8	8 1/4	8 1/4	8 1/2	in.
Carbon	**1/7**	**1/7**	**1/9**	**1/9**	**1/11**	**1/11**	**2/2**	**2/2**	**2/3**	**2/3**	**2/6**	**2/6**	**2/9**	**2/9**	**2/10**	
High Speed	**2/11**	**2/11**	**3/2**	**3/2**	**3/5**	**3/5**	**3/8**	**3/8**	**3/10**	**3/10**	**4/1**	**4/1**	**4/1**	**5/5**	**5/5**	

Diameter	19/32	39/64	5/8	41/64	21/32	43/64	11/16	45/64	23/32	47/64	3/4	49/64	25/32	51/64	13/16	in.
Length	8 1/2	8 3/4	8 3/4	9	9	9 1/4	9 1/4	9 1/2	9 1/2	9 3/4	9 3/4	9 7/8	9 7/8	10	10	in.
Carbon	**2/10**	**3/1**	**3/1**	**3/4**	**3/4**	**3/5**	**3/5**	**3/8**	**3/8**	**3/9**	**3/9**	**4/-**	**4/-**	**4/2**	**4/2**	
High Speed	**5/8**	**5/11**	**5/11**	**6/1**	**6/1**	**6/4**	**6/4**	**6/9**	**6/9**	**7/3**	**7/3**	**7/8**	**7/8**	**8/2**	**8/2**	

Dia.	53/64	27/32	55/64	7/8	57/64	29/32	59/64	15/16	61/64	31/32	63/64	1	1 1/32	1 1/16	1 3/32	in.
L'th.	10 1/4	10 1/4	10 1/2	10 1/2	10 5/8	10 5/8	10 3/4	10 3/4	10 7/8	10 7/8	11	11	11 1/8	11 1/4	11 1/2	in.
Carbon	**4/6**	**4/6**	**5/-**	**5/-**	**5/4**	**5/4**	**5/8**	**5/8**	**6/3**	**6/3**	**6/8**	**6/8**	**7/1**	**7/7**	**8/-**	
H. Spd.	**8/7**	**8/7**	**9/3**	**9/3**	**9/11**	**9/11**	**10/7**	**10/7**	**11/3**	**11/3**	**11/11**	**11/11**	**13/1**	**14/-**	**15/-**	

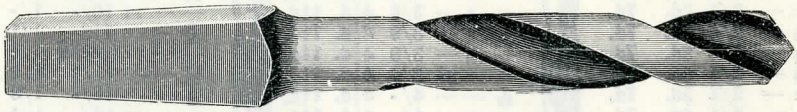
Diam.	1 1/8	1 5/32	1 3/16	1 7/32	1 1/4	1 9/32	1 5/16	1 11/32	1 3/8	1 13/32	1 7/16	1 15/32	1 7/16	1 15/32	1 1/2	in.
Length	11 3/4	11 7/8	12	12 1/8	12 1/2	14 1/8	14 1/4	14 3/8	14 1/2	14 5/8	14 3/4	14 7/8	15			in.
Carbon	**8/6**	**9/-**	**9/6**	**9/11**	**10/5**	**10/10**	**11/3**	**11/10**	**12/4**	**13/2**	**14/1**	**15/1**	**16/-**			
H. Spd.	**15/9**	**16/8**	**17/7**	**18/11**	**19/10**	**23/11**	**24/9**	**26/2**	**27/11**	**28/10**	**30/8**	**32/5**	**34/3**			



Twist Drills, all British made Carbon Steel, with shanks 1/2 in. diam., 2 1/4 in. long.
Over all length from 7/32 in. to 1 1/2 in. is 6 in.

1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	17/32	9/16	19/32	5/8	21/32	in.
11d.	**1/-**	**1/2**	**1/2**	**1/3**	**1/5**	**1/6**	**1/8**	**1/9**	**1/9**	**1/11**	**2/-**	**2/2**	**2/3**	**2/5**	**2/6**	**2/9**	**3/2**	

11/16	23/32	3/4	25/32	13/16	27/32	7/8	29/32	15/16	31/32	1	1 1/8	1 1/4	1 5/16	1 3/8	1 7/16	1 1/2	in.
3/2	**3/8**	**3/8**	**4/-**	**4/-**	**4/5**	**4/5**	**4/11**	**4/11**	**5/3**	**5/3**	**6/2**	**6/11**	**7/6**	**8/4**	**8/9**	**9/5**	



Twist Drills for Ratchet Braces, all British Made.

With No. 2 taper square shanks, 1 3/4 in. long, 3/4 × 1/2 in.

Size and Length

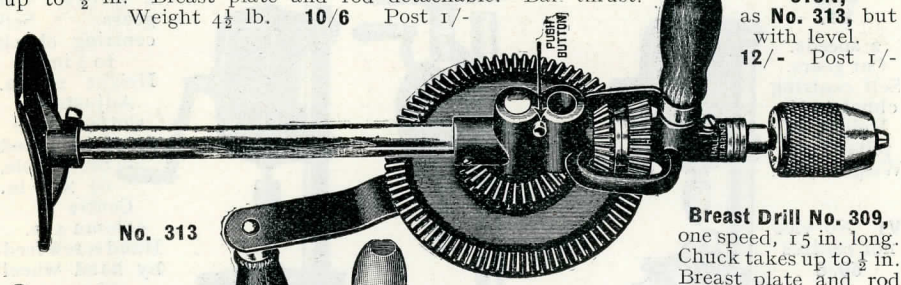
1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	17/32	9/16	5/8	11/16	3/4	13/16	7/8	1	1 1/8	1 1/4	1 3/8	1 1/2	in.
5	5	5	5	6	6 1/4	6 1/4	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	7	7 1/2	8 1/2	9	9	9	9	in.
2/1	**2/2**	**2/3**	**2/5**	**2/6**	**2/7**	**2/7**	**2/8**	**2/8**	**2/9**	**2/9**	**2/11**	**3/-**	**3/2**	**3/7**	**4/3**	**5/3**	**6/5**	**7/7**	**8/9**	**10/-**	

Please specify British made when ordering, as we carry all these Twist Drills in best American makes as well.

HAND and BREAST DRILLS

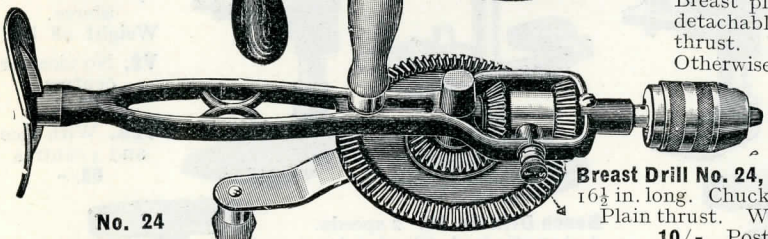
Breast Drill No. 313, two speeds, 15 in. long. Chuck takes up to ½ in. Breast plate and rod detachable. Ball thrust. Weight 4½ lb. **10/6** Post 1/-

Breast Drill 313N, as **No. 313,** but with level. **12/-** Post 1/-



No. 313

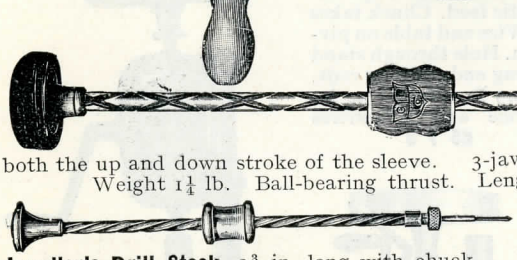
Breast Drill No. 309, one speed, 15 in. long. Chuck takes up to ½ in. Breast plate and rod detachable. Plain thrust. Weight 4 lb. Otherwise as No. 313. **7/-** Post 1/-



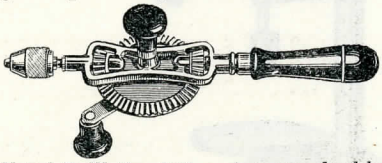
No. 24

Breast Drill No. 24, two speeds, 16½ in. long. Chuck takes to ½ in. Plain thrust. Weight 4½ lb. **10/-** Post 1/-

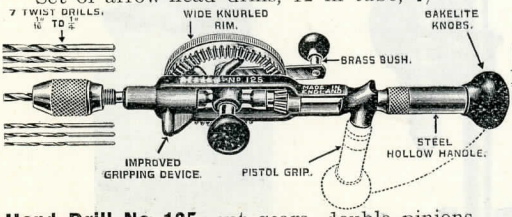
No. 0G, Reciprocating Drill. In this drill-stock the drill always works forward on both the up and down stroke of the sleeve. Weight 1¼ lb. Ball-bearing thrust. 3-jaw self-centring chuck takes up to ¼ in. Length 16½ in. **14/6** Post 6d.



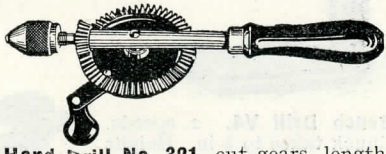
Jeweller's Drill Stock, 3¾ in. long with chuck, very nicely made. **1/6** Post 2d.
Set of arrow-head drills, 12 in tube, **1/-**



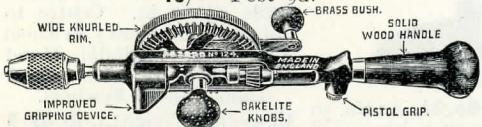
Hand Drill No. 312, cut gears, double pinions, length 12 in., weight 1¼ lb. Hollow handle. No drills. **6/-** Post 6d.



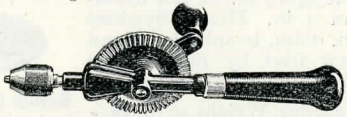
Hand Drill No. 125, cut gears, double pinions, large gear has wide milled rim. Hollow handle with 7 twist drills 1/16 to ¼ in. Ball thrust. Length 13½ in. Weight 2½ lb. British made. **15/-** Post 9d.



Hand Drill No. 321, cut gears, length 12 in. Chuck takes up to ¼ in. Weight 18 oz. **3/9** Post 6d.



Hand Drill No. 124, as No. 125 above, but with solid hardwood handle. No drills. British made. **12/6** Post 9d.



Hand Drill No. 316, cut gears. Length 9½ in. Chuck takes up to ¼ in. Weight 1 lb. **2/9** Post 6d.

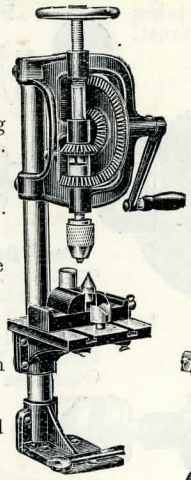
Hand Power Drilling Machines

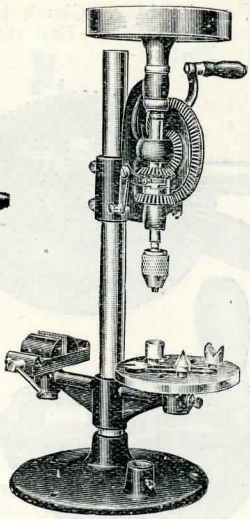
Bench Drill V1.

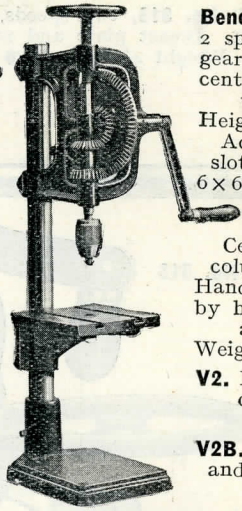
2 speeds. Cut gears. Self centring chuck to ½ in. Height of pillar 24 in. Weight 29 lbs.

V1 No vice nor centres **50/6**

V1B With vice and 3 centres as illustrated **59/-**





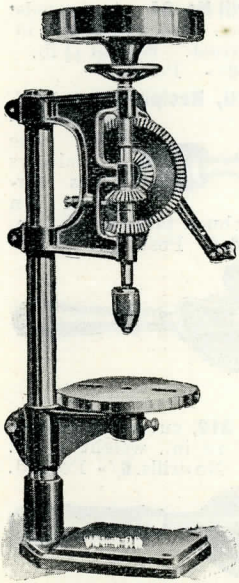


Bench Drill V2. 2 speeds. Cut gears. Self centring chuck to ½ in. Height 26 in. Adjustable slotted table 6 × 6¾ in. Fixed base table, 6¼ × 7 in. Centre to column 4 in. Hand screw feed by hand wheel above. Weight 28 lbs.

V2. No vice nor centres **54/3**

V2B. With vice and 3 centres **63/-**

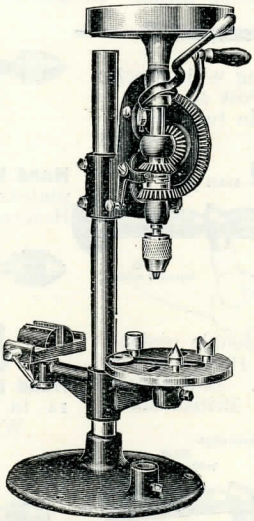
Bench Drill No. 30. 2 speeds. Automatic feed. Chuck takes to ½ in. Vice and table on pivoted arm. Hole through stand for drilling ends of long rods. Weight 49 lb. Height 30 in. With vice and 3 centres **£5 7 3**



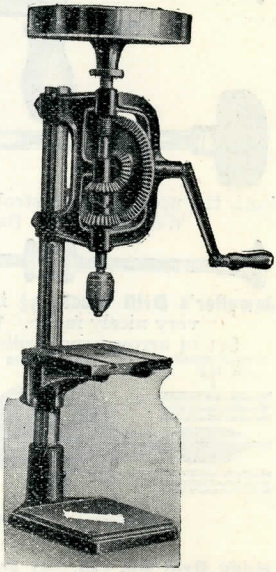
Bench Drill V4. 2 speeds. Chuck takes to ½ in. Height 29 in. Adjustable circular table 7¾ in. diam. Fixed base table 6¼ × 7 in. Centre to column 4 in. Heavy flywheel 8 in. diam. to spindle. Hand screw feed by hand wheel shown under flywheel.

V4 as illus. Weight 40 lb. **75/-**

V4B with 3 centres and vice with shank **84/-**



Bench Drill No. 31. As No. 30 but with sensitive lever feed instead of automatic feed. Vice and centres **£5 5 0**

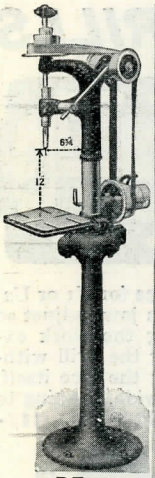


Bench Drill V3 2 speeds. Chuck takes to ½ in. Height 29 in. Adjustable slotted table 6 × 6¾ in. Fixed base table 6¼ × 7 in. Centre to column 4 in. Heavy flywheel 8 in. diam. to spindle. Hand screw feed by hand wheel shown under flywheel.

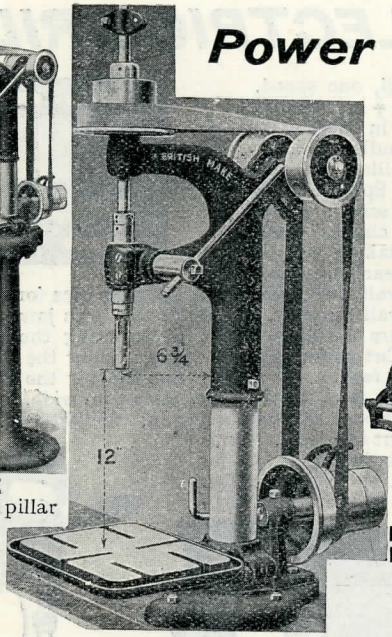
V3 as illus. Weight 37 lb. **69/9**

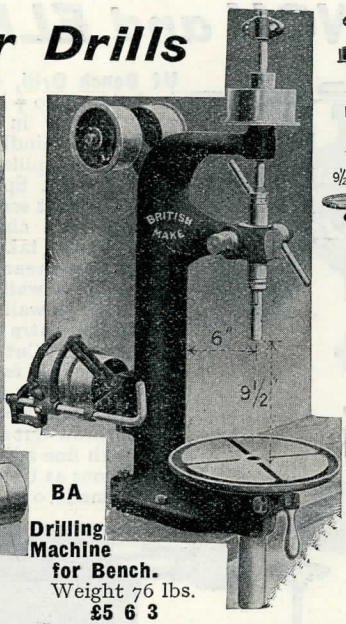
V3B. With vice and 3 centres **78/3**

Power Drills

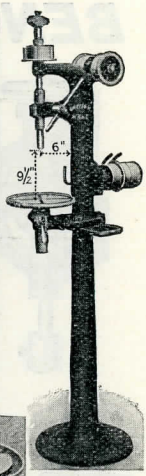


BE
12in., on pillar
Weight
150 lbs.
£8 2 0





BA
Drilling Machine for Bench.
Weight 76 lbs.
£5 6 3



BA Drill
on pillar.
Weight
140 lbs.
£7 0 0

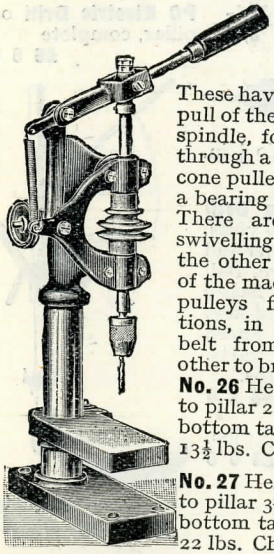
BE 2-speed Drilling Machines for holes up to ½ in. Table 10 × 12 in. Feed of spindle 3¾ in. Fast and loose pulleys 4 × 1⅝ in. Spindle takes No. 1 Morse taper.

BE 12 in., spindle to table 12 in.
Weight 90 lbs. **£6 5 0**

BE 18 in., spindle to table 18 in.
Weight 96 lbs. **£6 17 9**

Pillar. Weight 65 lbs. **£1 17 0**

BA Drilling Machines for holes up to ½ in. diameter of table 9½ in. Spindle to table 9½ in. Feed of spindle 3¾ in. Ball thrust. No. 1 Morse taper.



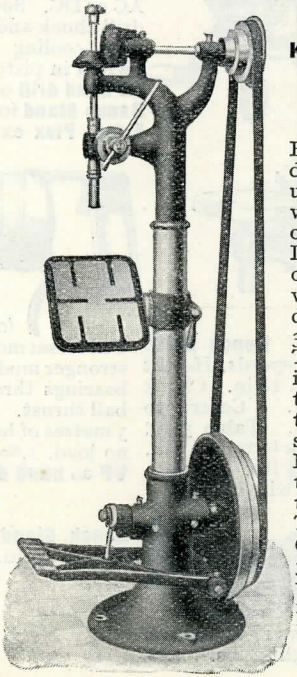
Bench Drill No.26.

Small Power Bench Drills.

These have ball thrust. The pull of the belt is not on the spindle, for the latter runs through a bush carrying the cone pulley. This bush has a bearing above and below. There are 2 tables, one swivelling and adjustable, the other forming the foot of the machine. The guide pulleys fix in two positions, in one to carry the belt from below, in the other to bring it from above.

No. 26 Height 19 in. Centre to pillar 2¾ in. Distance to bottom table 5¾ in. Weight 13½ lbs. Chuck to ¼ in. **65/-**

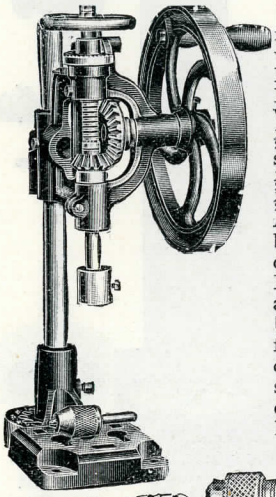
No. 27 Height 23 in. Centre to pillar 3⅞ in. Distance to bottom table 6 in. Weight 22 lbs. Chuck to ⅜ in. **86/-**



K Foot Power Drilling Machine.

Bevel wheel drive for holes up to ½ in. Fly-wheel spindle on ball bearings Drills to centre of 12¾ in. Fly-wheel 17½ in. diam. Pillar 3½ in. diam. Table 10 × 12 in. Spindle takes 1 Morse taper. Feed of spindle 3¾ in. Maximum distance spindle to table 24 in. Total height 67½ in. Weight 305 lbs. Price with fixed and not tilting table **£17 3 9**
Belt extra.

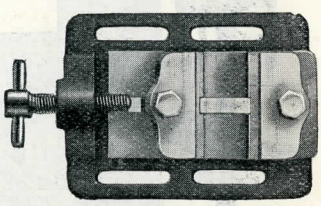
BENCH and ELECTRIC DRILLS



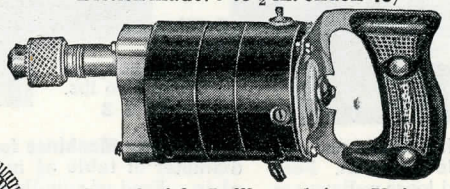
U1 Bench Drill.

U1 Bench Drill, one speed, for holes up to $\frac{5}{8}$ in. Admits work 12 in. in diameter. Feed of spindle $2\frac{1}{2}$ in. Height of pillar 23 in. Weight 40 lbs. Spindle takes $\frac{1}{2}$ in., with set screw. 3-jaw self-centring chuck with $\frac{1}{2}$-in. shank, taking up to $\frac{1}{2}$ in., goes with each machine. Arranged as wall drill, with the base fixed to wall or pillar, it will drill in the centre of a 36-in. circle. Ball thrust. Cut gears. Adjustable automatic feed. **40/-**

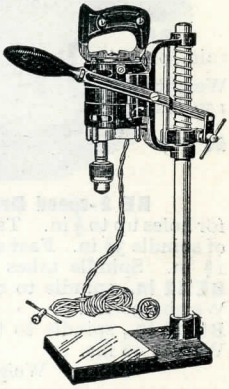
U2 Bench Drill, two speeds, one fast and one slow. Adjustable, quick, throw-out self-feed. Depth stop with fine adjustment. Other dimensions as U1. Weight 43 lbs. British made. 0 to $\frac{1}{2}$ in. chuck **45/-**



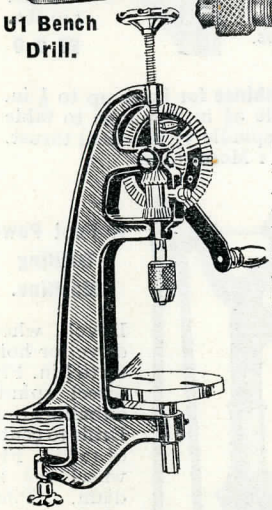
Machine Vice for U1 or U2. In this both jaws adjust so as to bring the work exactly under the drill without shifting the vice itself. Jaws 3 in. wide, opening to 3 in. Weight $8\frac{1}{2}$ lbs. **11/-**



PC Electric Drill, to $\frac{1}{4}$ in. Universal motor, 110, 200/220, 230/250 volts AC or DC. Supplied with self-centring drill chuck and key to $\frac{1}{4}$ in. Equipped with cooling fan and ball-bearings. Switch in pistol grip handle.
As **hand drill** only, weight $5\frac{1}{2}$ lbs. **84/-**
Bench Stand for above, do. 14 lbs. **42/-**
Triple Flex extra **3/6**

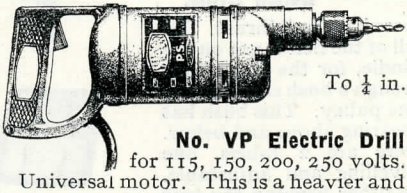


PC Electric Drill on pillar, complete **£6 6 0**



Bench Drill.

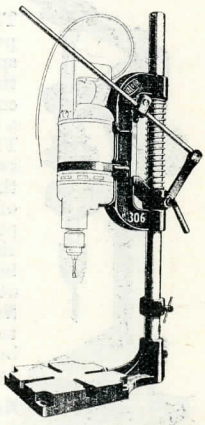
No. V5, two speeds. Height above bench 18 in. Chuck up to $\frac{3}{8}$ in. Centre to frame $2\frac{7}{8}$ in. Table 5 in. diam. Chuck to table $4\frac{1}{4}$ in. Weight $10\frac{1}{4}$ lbs. **18/3**
Carriage U. Kingdom **2/-**



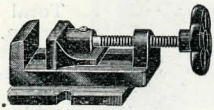
To $\frac{1}{4}$ in.

No. VP Electric Drill for 115, 150, 200, 250 volts. Universal motor. This is a heavier and stronger model than the PC above. Ball bearings throughout. Specially heavy ball thrust. 3-jaw drill chuck and key. 3 metres of heavy flex supplied. Speed no load, 1,600 revs. Takes 150 watts.
VP as **hand drill** only, weight 7 lbs. **£8 2 0**

Bench Stand 306, for VP, weight 27 lbs. Height 26 in. Travel 4 in. **£3 0 0**

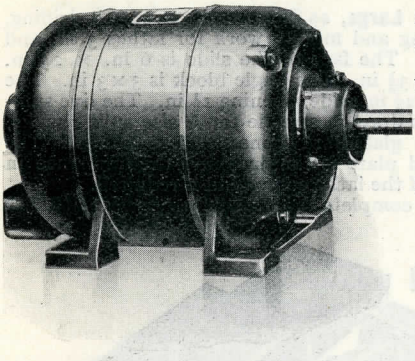


No. 306 Bench Stand.



Vice No. 302 for V5.
Width of jaws $1\frac{7}{8}$ in. Open $1\frac{1}{2}$ in. Weight 2 lbs. **4/-**

ELECTRIC MOTORS



Alternate Current, 50 periods, Crompton Minor.

Split Phase.

100/110, 200/210, 220/230, 240/250 volts.

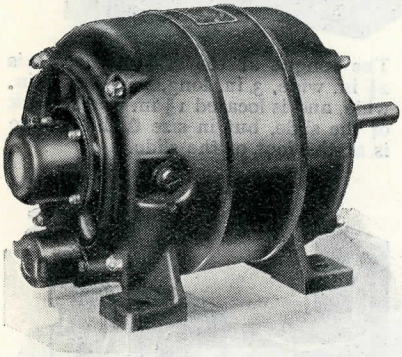
H.P.	Speed.	Weight.	Sp'dle.	Price.	Ex. for pulley.
$\frac{1}{8}$	1425	21 lbs.	$\frac{1}{2}$ in.	**66/-**	2 × 1 flat
$\frac{1}{6}$	1425	$31\frac{1}{2}$ lbs.	$\frac{5}{8}$ in.	**70/-**	or $1\frac{3}{4}$ V
$\frac{1}{4}$	1425	$31\frac{1}{2}$ lbs.	$\frac{5}{8}$ in.	**76/-**	**4/-**

Repulsion Induction.

100/105 or 200/210, 110/120 or 220/240.

$\frac{1}{8}$	1400	$34\frac{1}{2}$ lbs.	$\frac{5}{8}$ in.	**75/-**	$1\frac{3}{8}$ V	**3/-**
$\frac{1}{6}$	1425	$34\frac{1}{2}$ lbs.	$\frac{5}{8}$ in.	**80/-**	$2 \times 1\frac{1}{2}$	**4/-**
$\frac{1}{4}$	1400	$34\frac{1}{2}$ lbs.	$\frac{5}{8}$ in.	**90/-**	$2\frac{1}{2} \times 1\frac{1}{2}$	**4/-**
$\frac{1}{3}$	1400	54 lbs.	$\frac{3}{4}$ in.	**£5 3 6**	$2\frac{1}{2} \times 1\frac{1}{2}$	**4/-**
$\frac{1}{2}$	1420	54 lbs.	$\frac{3}{4}$ in.	**£6 16 0**	3 × 2	**9/-**
$\frac{3}{4}$	1430	$67\frac{1}{2}$ lbs.	$\frac{3}{4}$ in.	**£8 13 0**	3 × 2	**9/-**
1	1460	$78\frac{1}{2}$ lbs.	$\frac{3}{4}$ in.	**£9 17 6**	3 × 2	**9/-**

Drip proof sleeve bearing, all these motors may be switched on direct by double pole tumbler switch.



Direct Current, compound wound Crompton.

Direct Current.

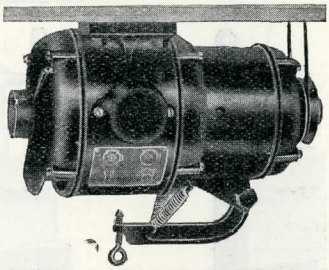
100/110, 200/210, 220/230, 240/250 volts.

H.P.	Speed.	Weight.	Sp'dle.	Price.	Ex. for pulley.	
$\frac{1}{8}$	1425	16 lbs.	$\frac{1}{2}$ in.	**78/-**	$1\frac{3}{4}$ V	**3/-**
$\frac{1}{6}$	1425	23 lbs.	$\frac{5}{8}$ in.	**83/-**	$2 \times 1\frac{1}{2}$	**4/-**
$\frac{1}{4}$	1425	23 lbs.	$\frac{5}{8}$ in.	**89/-**	$2\frac{1}{2} \times 1\frac{1}{2}$	**4/-**
$\frac{1}{3}$	1425	49 lbs.	$\frac{3}{4}$ in.	**£5 3 6**	$2\frac{1}{2} \times 1\frac{1}{2}$	**4/-**
$\frac{1}{2}$	1425	49 lbs.	$\frac{3}{4}$ in.	**£6 6 0**	3 × 2	**9/-**
$\frac{3}{4}$	1425	57 lbs.	$\frac{3}{4}$ in.	**£7 11 0**	3 × 2	**9/-**
1	1425	68 lbs.	$\frac{3}{4}$ in.	**£8 10 0**	3 × 2	**9/-**

Above motors are all standard patterns. Extras to order only: Extended spindle **10/-**, double end spindle, projecting each side **15/-**; ball bearings plus **10** per cent.

Ball Bearing ELECTRIC MOTORS Pedal Controlled

These are of foreign manufacture. The unit comprises motor, cone clutch and brake, entirely enclosed and self-contained. Ball bearings throughout. When the motor is started it runs free and the belts are stationary. Depressing a pedal first releases a brake and then engages a clutch. Directly the pedal is released the lathe or other appliance stops dead. One can make only half a turn or half a dozen turns if required, and can run at any speed by allowing the clutch to slip. Meanwhile the motor itself is always running at full speed.



Ball Bearing Pedal Controlled Unit.

Direct Current Shunt Wound. Voltages 65 to 250. Speed 1,500 revs.

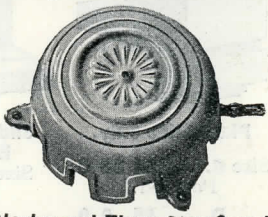
G549 $\frac{1}{10}$ h.p. **£6 17 9** Starter and 3 stop speed regr. **15/-**

G531 $\frac{1}{6}$ h.p. **£8 3 6** Starter and 3 stop speed regr. **15/-**

Alternate Current Single Phase, 40-60 periods, other cycles 10 per cent. extra. Voltages 65 to 250. Speed 1,400 revs.

K550 $\frac{1}{10}$ h.p. **£7 12 9** **K532** $\frac{1}{6}$ h.p. **£8 16 6**

Alternate Current 3-Phase Motors. Ball bearing and plain. Up to 440 volts, all periodicities can be supplied. Prices on application.

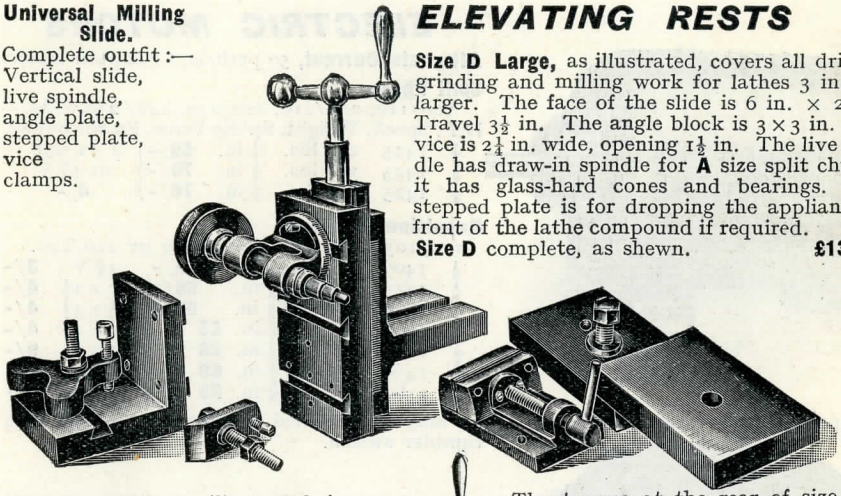


Starter and Three Stop Speed Regulator for D.C. Motors.

ELEVATING RESTS

Universal Milling Slide.
Complete outfit :—
Vertical slide,
live spindle,
angle plate,
stepped plate,
vice
clamps.

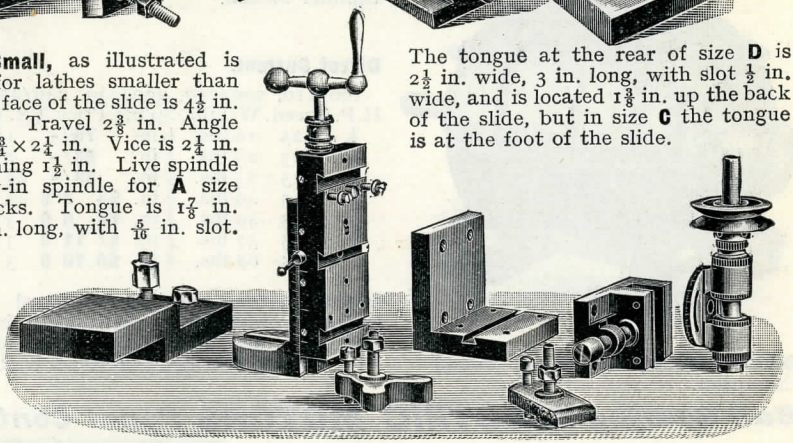
Size D Large, as illustrated, covers all drilling, grinding and milling work for lathes 3 in. and larger. The face of the slide is 6 in. × $2\frac{1}{2}$ in. Travel $3\frac{1}{2}$ in. The angle block is 3 × 3 in. The vice is $2\frac{1}{4}$ in. wide, opening $1\frac{1}{2}$ in. The live spindle has draw-in spindle for **A** size split chucks, it has glass-hard cones and bearings. The stepped plate is for dropping the appliance in front of the lathe compound if required.
Size D complete, as shewn. **£13 0 0**

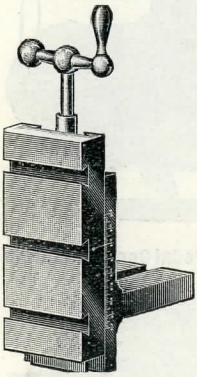


Size C Small, as illustrated is suitable for lathes smaller than 3 in. The face of the slide is $4\frac{1}{2}$ in. × $1\frac{7}{8}$ in. Travel $2\frac{3}{8}$ in. Angle plate is $2\frac{3}{4} \times 2\frac{1}{4}$ in. Vice is $2\frac{1}{4}$ in. wide opening $1\frac{1}{2}$ in. Live spindle has draw-in spindle for **A** size split chucks. Tongue is $1\frac{7}{8}$ in. wide, 2 in. long, with $\frac{5}{16}$ in. slot.

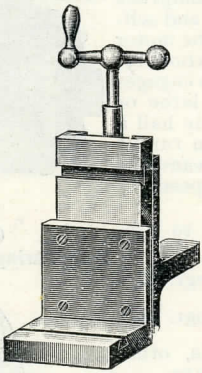
Size C.
complete
as shewn
£12 0 0

The tongue at the rear of size **D** is $2\frac{1}{2}$ in. wide, 3 in. long, with slot $\frac{1}{2}$ in. wide, and is located $1\frac{3}{8}$ in. up the back of the slide, but in size **C** the tongue is at the foot of the slide.

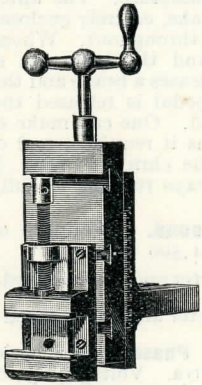




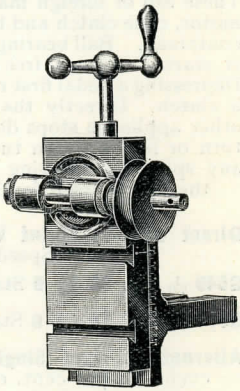
Plain Slide only.
Size **C.** **£4 15 0**
Post 9d.
„ **D.** **£5 0 0**
Post 1/-



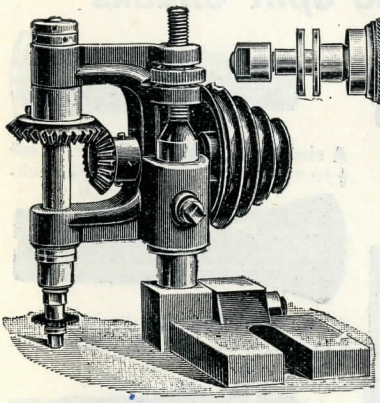
Slide and Angle Block only.
Size **C.** **£6 10 0**
Post 1/-
„ **D.** **£6 15 0**
Post 1/3

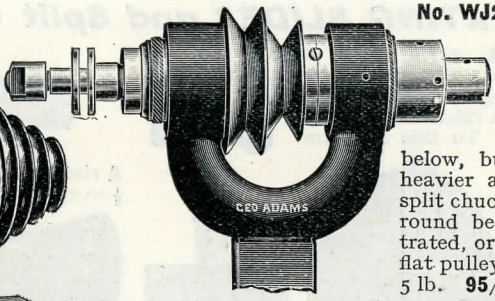


Slide and Vice only.
Size **C.** **£6 10 0**
Post 1/-
„ **D.** **£6 15 0**
Post 1/3

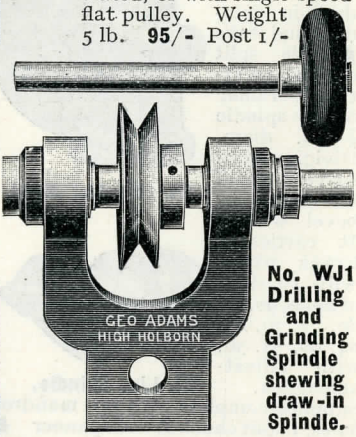


Slide and Live Spindle only.
Size **C.** **£8 10 0**
Post 1/3
„ **D.** **£9 0 0**
Post 1/3



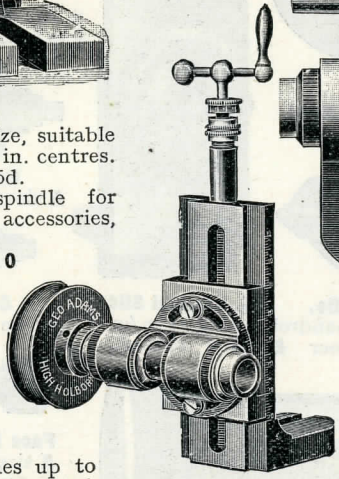


No. WJ2 Drilling and Grinding Spindle. With draw-in spindle, is similar to No. WJ1 below, but is larger and heavier and takes B size split chucks, with 2-speed round belt cone, as illustrated, or with single speed flat pulley. Weight 5 lb. **95/-** Post 1/-



No. WJ1 Drilling and Grinding Spindle shewing draw-in Spindle.

Geared Cutter Frames.
No. 6a Extra small size, suitable for little lathes up to 2 in. centres. **£3 7 6** Post 6d.
No. 12 has draw-in spindle for A size, split chucks and accessories, suitable for lathes up to $3\frac{1}{2}$ in. centres. **£5 5 0**
No. 12/1 has draw-in spindle for B size. Suitable for lathes above $3\frac{1}{2}$ in. centres. **£7 15 0**

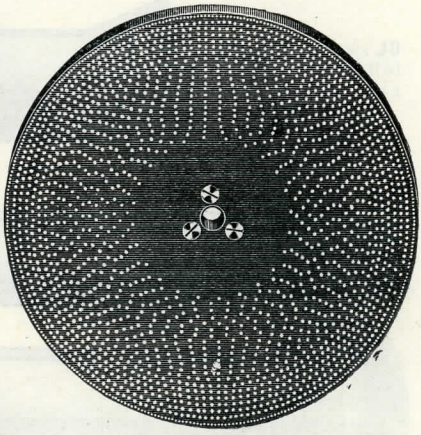


No. WJ1 has glass-hard spindle and bearings and will run at very high speeds. Draw-in spindle takes A size split chucks, emery wheel and saw arbors. Weight $2\frac{1}{2}$ lb. **£2 16 0** Post 9d.

Drilling Spindle No. 6A1 with Vertical Slide.
Vertical travel $2\frac{3}{4}$ in. This is suitable for lathes up to $3\frac{1}{2}$ in. It is nickel-plated and polished. It has cast steel, glass-hard hollow spindle. The spindle may be set in any position from horizontal to vertical. It has draw-in spindle and takes A split chucks. **£5 5 0** Post 9d.

Parallel Vice. No. 6C2.
Width $1\frac{3}{4}$ in., jaws open 1 in., depth in jaws $\frac{5}{8}$ in. **£1 15 0**

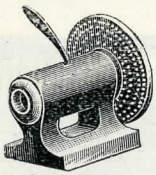
No. 6C1 Angle Plate with clamp. Fits on the face of 6A1. **32/3**



No. 6D Division Plate.
$6\frac{1}{4}$ in. diam. 21 rows of holes, 360, 204, 192, 186, 168, 156, 150, 144, 132, 100, 80, 76, 70, 58, 54, 49, 47, 46, 43, 37, 31. Bore 10 or 12 m/m. **58/6** Post 6d.

Dividing Head with division plate. Height sole to centre, $1\frac{1}{2}$ in. Each is supplied with draw-in spindle. 4 rows of holes 60, 42, 36, 24 and index. These fix by a centre stud to the universal slide and to the plate 6C1.

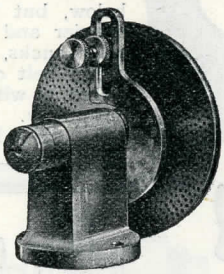
No. 11/10	takes B split chucks		**63/-**
No. 11/15	,, CL ,,	,,	**78/-**
No. 11/20	,, F ,,	,,	**92/-**



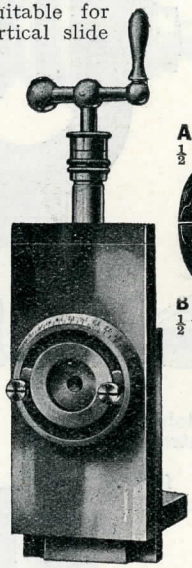
Dividing Head.

ELEVATING SLIDES and Split Chucks

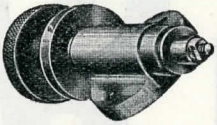
Vertical Slide BL, extra small, suitable for 2-in. centre lathes. Comprising vertical slide with $1\frac{1}{4}$ in. travel, graduated thimble. Face of slide has a raised boss graduated 90 degrees. To this boss are fixed the live spindle or the dividing head. Both appliances have draw-in spindles and take **A** size split chucks and fittings. Pulley on live spindle $\frac{7}{8}$ in. diam. Dividing head swivels around for spur or bevel wheels. It carries a brass plate with 10 rings of holes, 90, 84, 80, 72, 70, 68, 64, 60, 54, 50, with adjustable index.



BL Dividing Head.



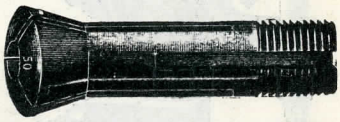
BL Vertical Slide.



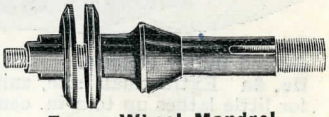
BL Live Spindle.

Supplied complete with saw mandrel, taking $4\frac{1}{2}$ m/m holes, 1 split chuck **A** and spanner **£8 15 0** Post 9d.

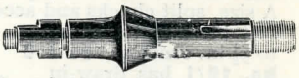
A size **Split Chuck,** full size. Sizes $\frac{1}{2}$ to $7\frac{2}{10}$ m/m by $\frac{1}{10}$ m/m. **2/3** each.



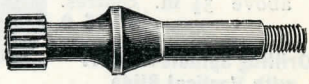
B size **Split Chuck,** full size. Sizes $\frac{1}{2}$ to 8 m/m by $\frac{1}{10}$ m/m. **3/-** each.



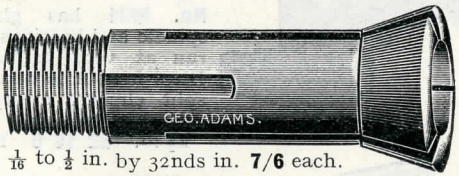
Emery Wheel Mandrel.
A size **6/9** **B** size **7/-**



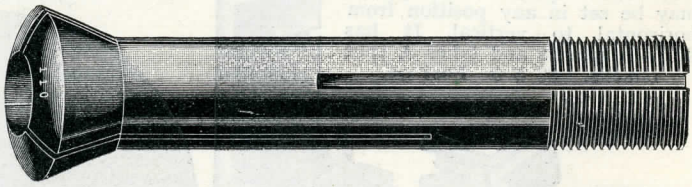
Circular Saw Mandrel.
A size **6/6** **B** size **7/-**



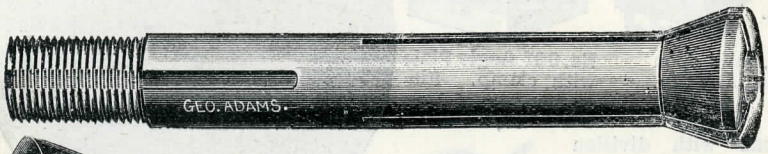
Face Milling Cutter on mandrel
A size **6/6** **B** size **10/6**
Extra face cutters only :—
11 m/m **2/9**; 13 m/m **3/-**; 15 m/m **3/6**; 17 m/m **3/9**



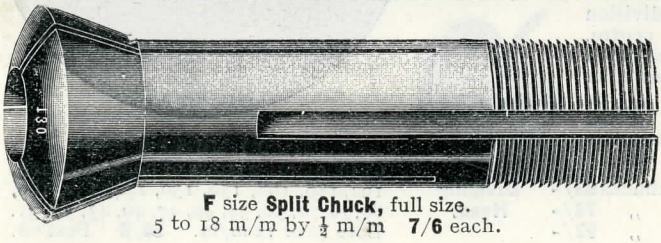
C size **Split Chuck,** full size.
15 sizes, $\frac{1}{16}$ to $\frac{1}{2}$ in. by 32nds in. **7/6** each.



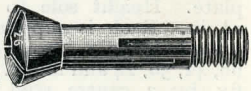
CL size **Split Chuck,** full size. Sizes $\frac{1}{2}$ to 13 m/m by $\frac{1}{2}$ m/m **6/8** each.



D size **Split Chuck,** full size. Sizes $\frac{1}{2}$ to 10 m/m by $\frac{1}{2}$ m/m **7/6** each.



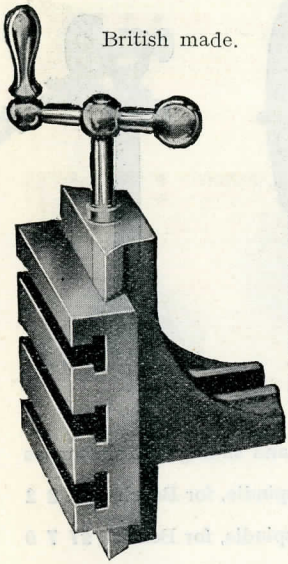
F size **Split Chuck,** full size.
5 to 18 m/m by $\frac{1}{2}$ m/m **7/6** each.



L size **Split Chuck,** full size. Sizes $\frac{4}{10}$ to 5 m/m by $\frac{1}{10}$ m/m **2/2** each **L** is the watchmaker's size.

Vertical Slides

British made.

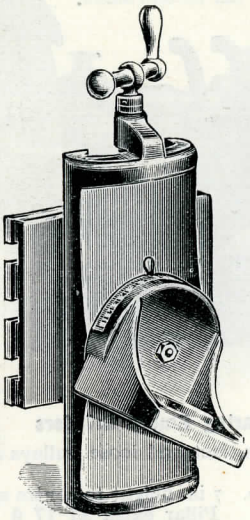


Plain Vertical Slide.

No. 0. For $2\frac{1}{2}$ in. lathes, table $3\frac{1}{4} \times 4\frac{1}{2}$ in. **27/-** Post 1/-

No. 1. For lathes 3 and $3\frac{1}{2}$ in. Table 4 in. square **29/-** Rail.

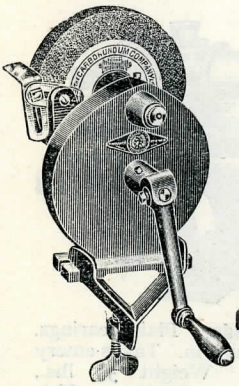
No. 2. For lathes 4 and $4\frac{1}{2}$ in. Table 5 in. square **34/-** Rail.



Swivelling Vertical Slide.

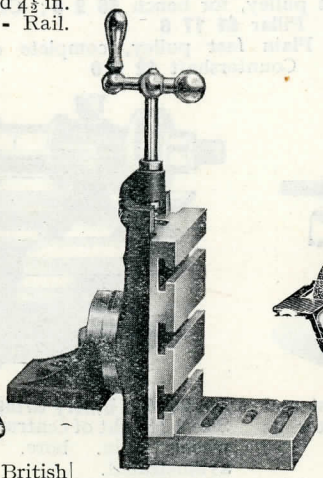
	No. A	B
For lathes	$2\frac{1}{2}$ to 3,	$3\frac{1}{2}$ & 4in.
Table	$2\frac{1}{2} \times 3\frac{1}{4}$	4×5 in.
	50/-	**57/6**

Post 1/- Rail.



Niagara Grinders are British made. They have a flat foot with a separate forked clamp.

No.	Wheel	Weight	
1	4×1	10 lbs.	**21/-**
2	5×1	$11\frac{1}{2}$,,	**24/-**
3	6×1	$14\frac{1}{2}$,,	**34/-**
4	$7\frac{1}{2} \times 1\frac{1}{4}$	26 ,,	**40/-**

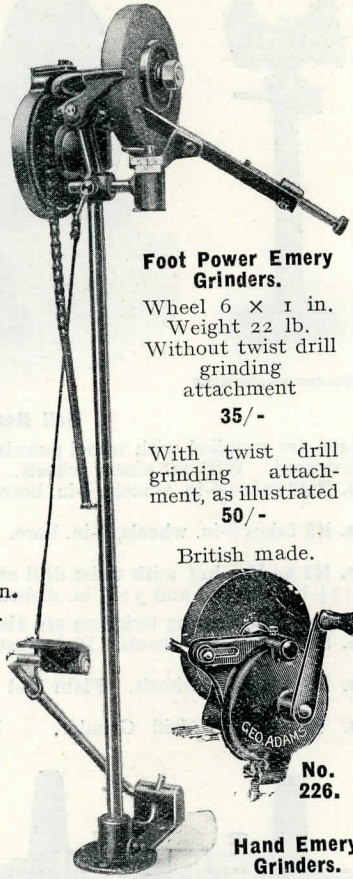


No. 1B. Swivelling Vertical Slide and Angle Bracket.

For lathes $3\frac{1}{2}$ and 4 in. Table 5×4 in. **57/-** Rail

British made.

Emery Grinders



Foot Power Emery Grinders.

Wheel 6×1 in. Weight 22 lb. Without twist drill grinding attachment

35/-

With twist drill grinding attachment, as illustrated

50/-

British made.

No. 226.

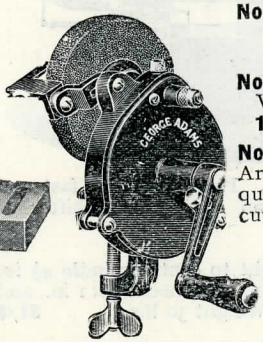
Hand Emery Grinders.

No. 226. Wheel $4 \times \frac{3}{4}$ in. **6/-** Post 1/-

No. 207. Wheel 6×1 in. **11/3** Post 1/3

Nos. 805 and 806. Are of superior quality with spiral cut gears and silent.

No. 805. Wheel 5×1 in. **19/6** Post 1/3



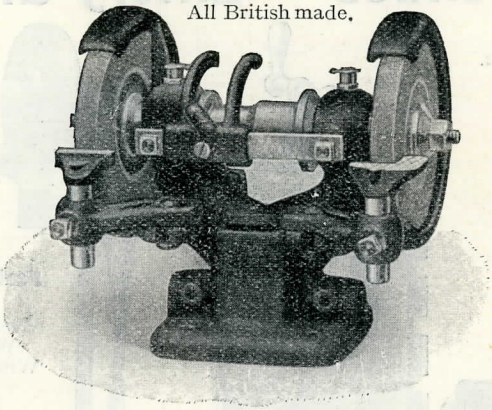
No. 805.

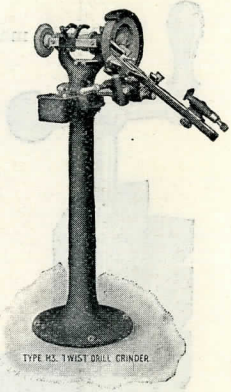
No. 806. Wheel 6×1 in. **25/-** Rail.

POWER EMERY GRINDERS

All British made.

H.2 GRINDER 8" & 8" WHEELS





TYPE H3. TWIST DRILL GRINDER

Ball Bearing Emery Grinders

These are supplied with wheel guards, fast and loose pulleys and sliding belt shifter, as illustrated. Without emery wheels.

No. HH2 takes 6-in. wheels, ½-in. bore. 7 in. height to centre spindle, for Bench **£4 8 2**
Pillar extra **£1 17 6**

No. H2 takes 8-in. wheels, ¾-in. bore. 8½ in. height to centre spindle, for Bench **£7 7 0**
Pillar extra **£1 17 6**

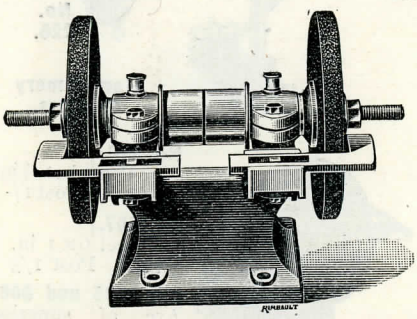
No. H3 as H2, but with twist drill attachment up to 2 in. Supplied with emery wheels 8 × 1¼ in. recessed and 5 × ½ in. dished. On pillar, with water pot **£14 5 4**

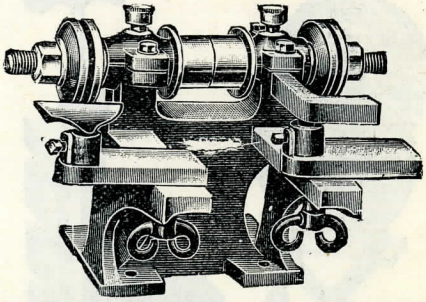
H Type Ball Bearing Grinders are also supplied with fast pulley and extra countershaft.

No. HH2 for 6-in. wheels. Plain fast pulley, for bench **£4 0 0**; Countershaft **£2 5 0**;
Pillar **£1 17 6**

No. H2 for 8-in. wheels. Plain fast pulley, for bench **£6 2 6**; Countershaft **£2 5 0**;
Pillar **£1 17 6**

No. H3 with T/drill Grinder. Plain fast pulley, complete on pillar **£13 1 0**;
Countershaft **£2 5 0**





Emery Grinders. Plain bearings, fast and loose pulleys and sliding belt shifter as **H** above.

No. G4aG Height to centre spindle 4½ in. Supplied with 2 emery wheels, 6 × 1 in., and wheel guards. Weight 30 lbs. **51/6**

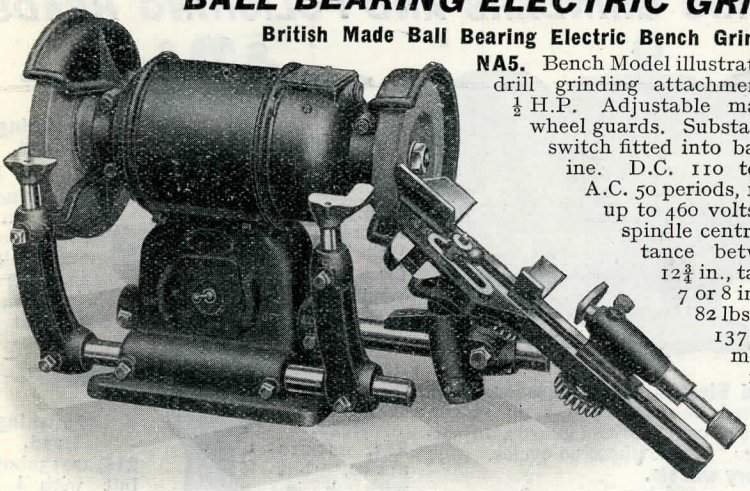
No. G3aG Height to centre spindle 6 in. Takes emery wheels 10 in. diam., ¾ in. bore. Weight 28 lbs.
No wheels nor wheel guards. **32/6**

No. 243A. Emery Grinder. Plain bearings.
Size **1** Height of centres 6 in. Takes emery wheels 1-in. bore. Weight 55 lbs., as illustrated. **42/-**
Size **2** Height of centres 8 in. Takes emery wheels 1⅛-in. bore. Weight 74 lbs., as illustrated. **56/-**
Size **3** Height of centres 10 in. Takes emery wheels 1¼-in. bore. Weight 105 lbs., as illustrated. **69/6**

Stands for **243A.** 28½ in. height, weight 100 lbs. Sizes 1 and 2 **46/6** Size 3 **48/9**

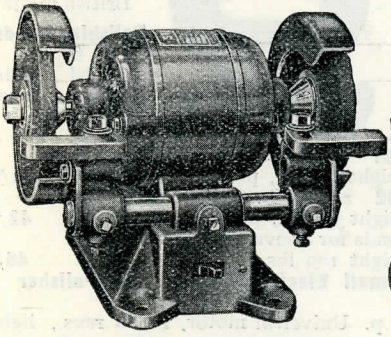
BALL BEARING ELECTRIC GRINDERS

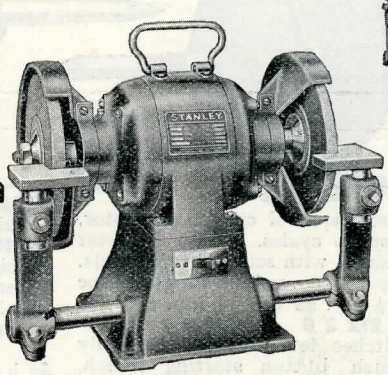
British Made Ball Bearing Electric Bench Grinder.

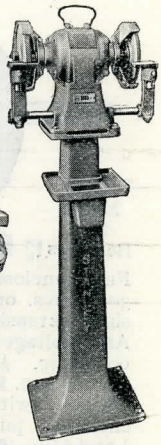


NA5. Bench Model illustrated with twist drill grinding attachment. Motor ½ H.P. Adjustable malleable iron wheel guards. Substantial starting switch fitted into base of machine. D.C. 110 to 250 volts. A.C. 50 periods, 1, 2 or 3 phase up to 460 volts. Height to spindle centre 10 in. Distance between wheels 12¾ in., takes wheels 6, 7 or 8 in. Net weight 82 lbs. Gross weight 137 lbs. Measurement, 4 cubic feet.

NA5	**Bench Grinder** with two wheels, no twist drill attachment	**£14 3 0**
	Twist drill attachment up to 1¼ in. drills	**4 5 0**
Pillar Stand,	weight 75 lbs.	**2 0 0**







No. 586 Stanley Electric Bench Grinder. Ball bearings. Supplied with two emery wheels 6 × ½ × ½ in. bore, one fine and one coarse, wheel guards and tool rests; also 8 ft. rubber covered cable with switch. Overall width 13⅛ in. Net weight 40 lbs. Gross weight 57 lbs.

A.C. £8 4 6. D.C. £9 12 0.

Can be supplied A.C. 110 & 220 volts

D.C. 115 & 230 volts.

When ordering specify type of current, voltage and cycles.

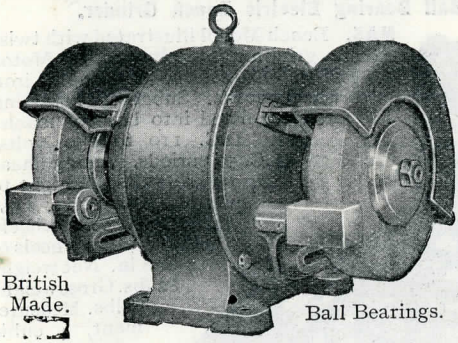
Speed at 60 cycles, 3,500 revs.

No. 556 Stanley Electric Bench Grinder, ball bearings. Supplied with two emery wheels, 6 × ½ × ½ in. bore, one fine and one coarse, wheel guards and tool rests; also 12½ ft. rubber covered cable. Switch in base of grinder. Convenient handle for carrying about. Net weight, 40 lbs. Gross weight 56 lbs.

Bench Grinder **A.C. £10 10 0. D.C. £11 2 6.** Can be supplied A.C. 110 or 220 volts. D.C. 115 or 230 volts. When ordering specify type of current, voltage and cycles. Speed at 60 cycles, 3,450 revs.

Pedestal for 556, *see* illustration ..	**£3 10 0**
Taper Spindle, right hand, for polishing buffs	**12/9**
Straight Spindle, right hand, for polishing buffs	**12/9**
3-jaw Chuck, to ⅜ in.	**£1 0 3**

ELECTRIC GRINDERS AND POLISHING HEADS.

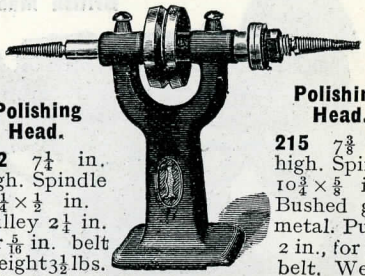


British Made. Ball Bearings.

Double Sided Electric Emery Grinder. A.C. Fully enclosed squirrel cage type motor, 1500 revs. on 50 cycles, wheel guards, adjustable tool rests. Single phase 60 cycles.

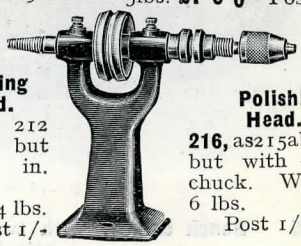
Without emery wheels.

¼ h.p.	¾ h.p.	1 h.p.
£12 0 0	**£13 10 0**	**£16 10 0**



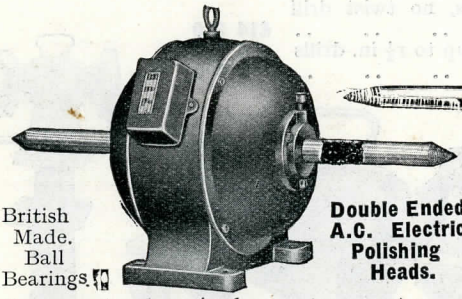
Polishing Head.
212 7¼ in. high. Spindle 10¼ × ½ in. Pulley 2¼ in. for 5/16 in. belt Weight 3½ lbs. **11/6** Post 9d.

Polishing Head.
215 7⅜ in. high. Spindle 10¾ × ⅝ in. Bushed gun-metal. Pulley 2 in., for ⅜ in. belt. Weight 5 lbs. **£1 0 0** Post 1/-



Polishing Head.
214, as 212 above, but with ¼ in. chuck. Weight 4 lbs. **14/-** Post 1/-

Polishing Head.
216, as 215 above, but with ½ in. chuck. Weight 6 lbs. **23/-** Post 1/-



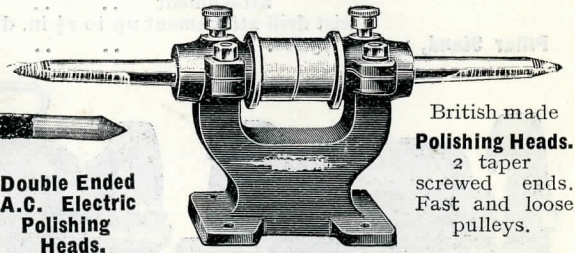
British Made. Ball Bearings.

Double Ended A.C. Electric Polishing Heads.

Fully enclosed squirrel cage type motor, 3000 revs. on 50 cycles. Large diameter shaft, extensions, with screwed taper ends. Any voltage to 500 volts. Single phase 60 cycles. ¼ h.p. **£9 0 0** ½ h.p. **£10 2 6** ¾ h.p. **£12 3 6** 1 h.p. **£14 0 0**

Twinob switches for ¼ h.p. **5/6** Fully enclosed push button starting switch, ½ and ¾ h.p., **£1 5 6** Graduated resistance starters, non auto type, for 1 h.p., **£2 11 0** If fitted with no volt release, **£3 0 0**

When ordering state voltage. Prices for 2 and 3 phase on application.

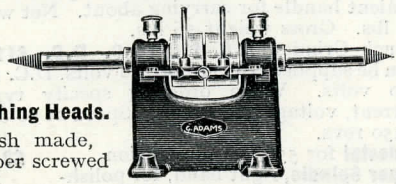


British made **Polishing Heads.** 2 taper screwed ends. Fast and loose pulleys.

2441 6 in. high. Spindle 22 × 1 in. Weight 26 lbs., pulleys 2½ × 1½ in. **32/3**
2442 8 in. high. Spindle 26 × 1⅛ in. Weight 37 lbs., pulleys 2¾ × 1¾ in. **42/-**
Stands for above. Height 28½ in. Weight 100 lbs. **46/6**

Small Electric Grinder and Polisher No. SECO.

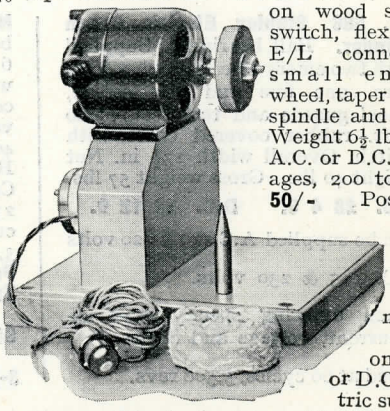
1/20 h.p. Universal motor, 12000 revs., light, on wood stand, switch, flex and E/L connector, small emery wheel, taper screw spindle and buff. Weight 6½ lbs., for A.C. or D.C. voltages, 200 to 240. **50/-** Post 1/3



Polishing Heads.
British made, 2 taper screwed ends.

Fast and loose pulleys and belt striker sliding on bar.

No. GA4P 4¾ in. high. Spindle 17½ × ¾ in., pulleys 2 × 1¼ in. Weight 12½ lbs. **27/-**
No. GA3P 6½ in. high. Spindle 23½ × ⅞ in., pulleys 3 × 1¾ in. Weight 23 lbs. **32/6**

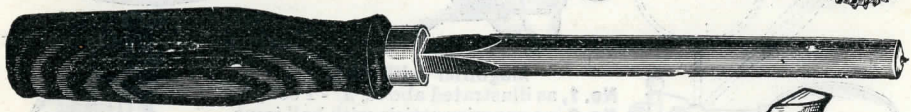


Universal motors run on A.C. or D.C. electric supply.

Emery Wheel 2½ × ⅜ in., with ½ in. hole. Buff 3 in. diam., 6 ft. twin flex.

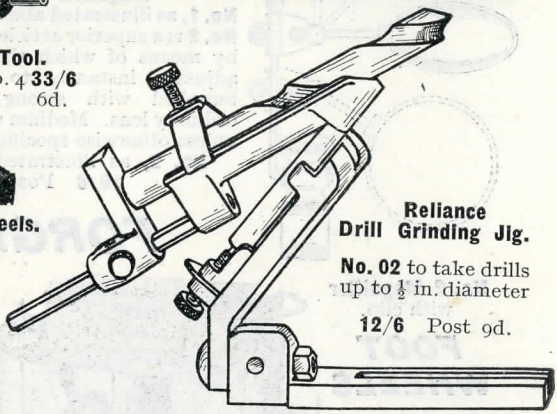
EMERY WHEEL DRESSERS

Emery Wheel Dresser.
Complete **4/6** Post 6d.
Extra Cutters, per set **5d.** Post 2d. per doz. sets **4/-** Post 6d.



Diamond Emery Wheel Turning Tool.
No. 1 **15/-** No. 2 **18/-** No. 3 **25/6** No. 4 **33/6**
Post 5d. 5d. 6d. 6d.

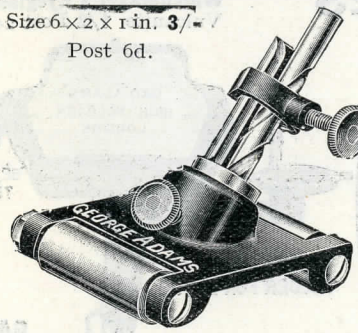
Carborundum Sticks for Dressing Wheels.
Size 6 × 2 × 1 in. **3/-**
Post 6d.



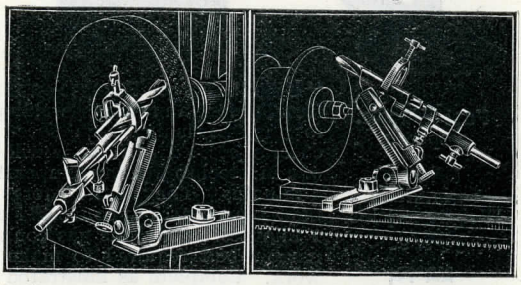
Reliance Drill Grinding Jig.
No. 02 to take drills up to ½ in. diameter
12/6 Post 9d.

This tool is fixed by a single nut to any size grinder. It may be used on either face of the wheel or horizontally for wet grinding. It may be mounted on a base board, clamped to a lathe bed, the wheel running in the head stock. The drill is held firmly in position while it is being ground by a single clamp. The trough being detachable from the bracket allows the setting of the drill to be done easily and accurately. The length of the spindle ensures a steady swing and a true conical backing off is obtained.

Reliance Jig 02 (to ½ in.) **12/6** Post 9d. **No. 1** (to 1 in.) **35/-** **No. 22** (to 2 in.) **70/-**



Drill Whet. This is used on a flat oilstone or on a board coated with carbo or emery paper. It consists of a carriage on 2 wide rollers. The drill is clamped in a V flute, which continues into a cylindrical portion with 2 opposed V grooves located by a knurled head screw. When one cutting edge is honed both the drill and flute are withdrawn and are reinserted the opposite way round, this bringing the other drill cutting lip against the stone precisely opposite and at the same angle as the first one.
Size **1** for drills $\frac{1}{16}$ to $\frac{3}{8}$ in. **7/6**
Post 6d.
Size **2** for drills ¼ to ½ in. **10/6**
Post 6d.

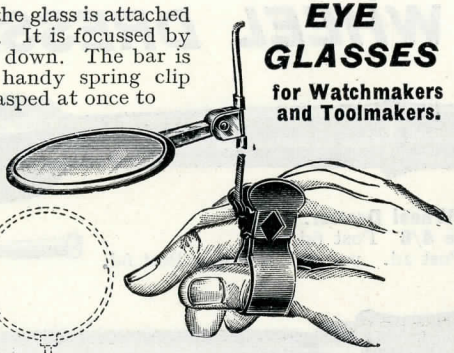


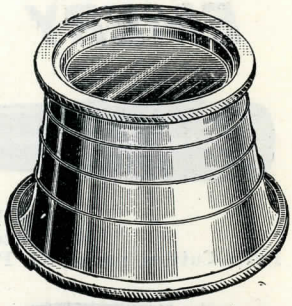
Reliance Jig on Grinder. Reliance Jig on lathe bed.

EYE GLASSES

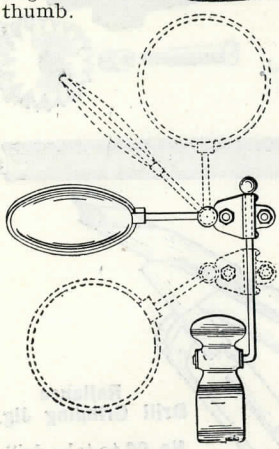
for Watchmakers and Toolmakers.

In this pattern the glass is attached to a plated bar. It is focussed by sliding it up or down. The bar is attached to a handy spring clip and it can be clasped at once to any part of an apparatus or to the finger or thumb.

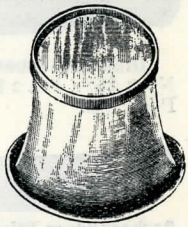




Watchmaker's Eyeglass.
Aluminium. Shuts up flat.
1/6 Post 2d.



Magnifier with Clip.
No. 1, as illustrated above, **3/-** Post 3d.
No. 2 is a superior article with ball joint by means of which the glass can be adjusted instantly to any position. Supplied with strong, medium or ordinary lens. Medium will be supplied unless otherwise specified.
No. 2, as illustrated alongside, **10/6** Post 3d.

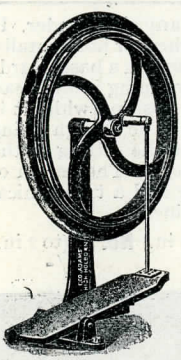


Watchmaker's Eyeglass.
Vulcanite. **1/2** Post 2d.

No. 2 Magnifier with clip.

FORGES

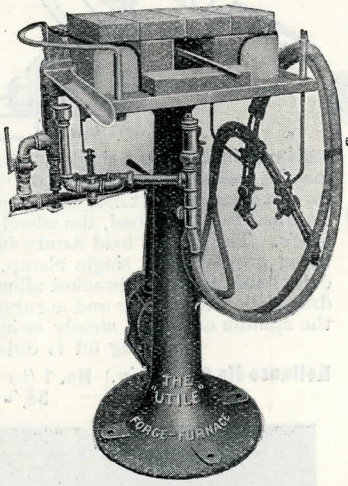
FOOT WHEELS



Foot Wheels.
3 speeds.

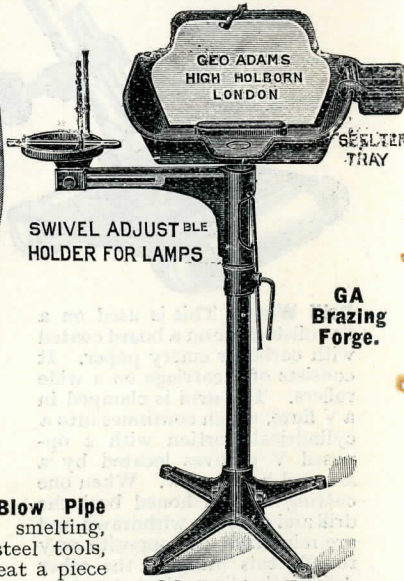
LA 11½,
15 in. diam.
Weight 20½ lbs.
36/6

LA 11,
18 in. diam.
Weight 22½ lbs.
36/6



"Utile" Forge Furnace and Blow Pipe Hearth for annealing, welding, smelting, forging, hardening high speed steel tools, cutters, etc. This furnace will heat a piece of 2 in. steel to welding temperature in about 3 minutes. The "Utile" forge furnace and blow pipe hearth is converted either way in 2 minutes. Only one gas connection and a narrow belt required to make it ready for work. Complete as illustrated with 2 blow pipes, power pressure blower and hardener **£15 4 3**

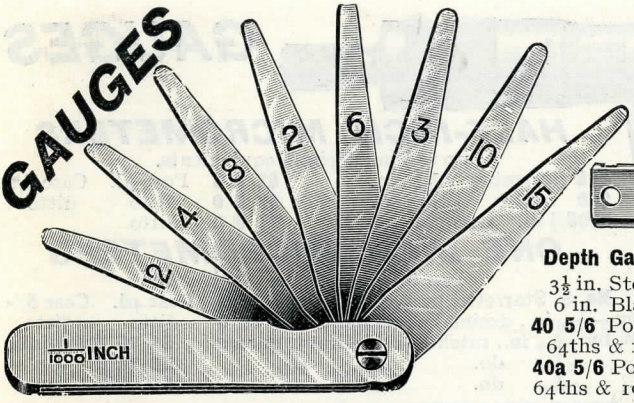
With one blow pipe only **£14 1 9**

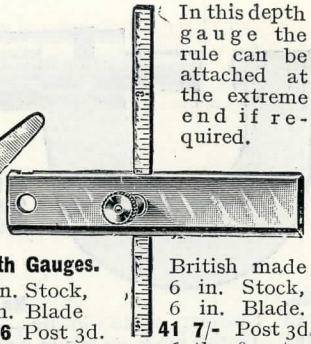


GA Brazing Forge.

GA Brazing Forge.
With adjustable lamp-holder. Weight 66 lbs.
39/6
14 lbs. Asbestos cubes for
7/-
No. 4 Vapouria Blow Lamp is suitable for this forge.

GAUGES





In this depth gauge the rule can be attached at the extreme end if required.

Depth Gauges.
3½ in. Stock, 6 in. Blade
40 5/6 Post 3d. 64ths & m/m
40a 5/6 Post 3d. 64ths & 100ths.

British made
6 in. Stock, 6 in. Blade.
41 7/- Post 3d. 64ths & m/m
41a 7/- Post 3d. 64ths & 100ths.

Feeler or Thickness Gauges with Tapered Blades.

1910/31 1½, 3, 4, 6, 8, 10, 12 Thou.
7—3 in. Blades. Best quality **3/-** Post 2d.

912 1½, 2, 3, 4, 6, 8, 10, 12, 15, 25 Thou.
10—3 in. Blades **1/9** „ 2d.

911 10—4 in. do. as 912 **2/-** „ 2d.

911R as 911 but with flexible rule **2/6** „ 2d.

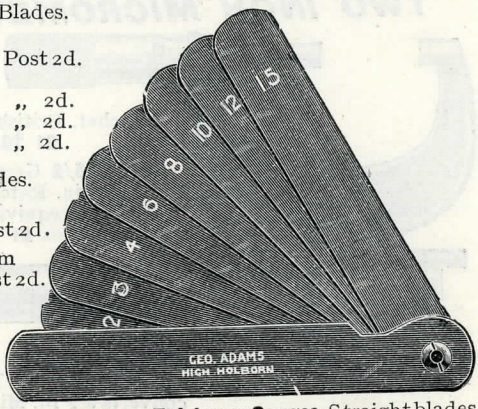
Metric Feeler Gauges with Tapered Blades.

1965/2 ·05, ·075, ·1, ·15, ·2, ·25, ·3, ·4 m/m
8—3 in. Blades ½ in. wide **4/3** Post 2d.

1878/4 ·05, ·1, ·15, ·2, ·3, ·4, ·5, ·6, ·7, ·8 m/m
10—4 in. Blades ½ in. wide **6/-** Post 2d.

Special Motor Gauge.

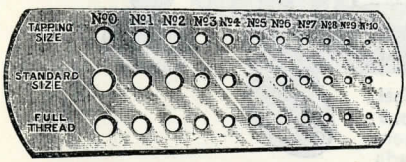
No. 29 Contains Blades: spark gap 25, contact breaker coil 15, contact breaker mag. 12, inlet valve side valve engines 4, exhaust valve do. 6, inlet and exhaust overhead valves 2½, Plug Cleaner
2/9 Post 2d.



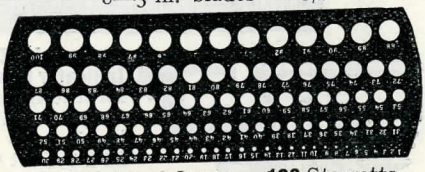
Feeler or Thickness Gauges. Straight blades.

909 1½, 2, 3, 4, 6, 8, 10, 12, 15 Thou.
9—3 in. blades **1/6** Post 2d.

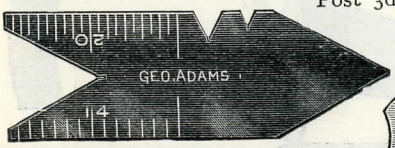
1767/B7 2, 3, 4, 6, 8, 10, 12, 15 Thou.
8—3 in. blades **3/9** Post 2d.

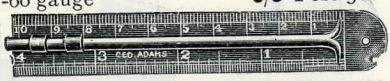


BA Gauge T gives standard and tapping sizes also tapped holes 0 to 10BA **9/3** Post 3d.



Drill and Rod Gauges. **186** Starretts. 1-60, decimal equivalents **10/-** Post 3d.
British made without decimal equivalents
1/16 to ½ in. × 64ths **3/9** Post 3d.
1-60 gauge **5/3** Post 3d.

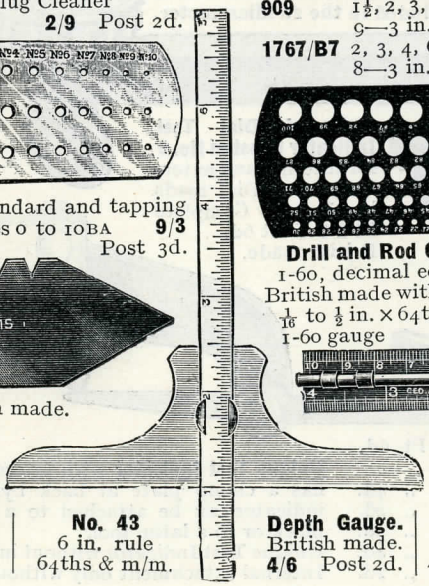




Centre Gauges British made.
Divided 4 edges.
24, 32, 14, 20ths in.

878 55° Whit. **1/0** Post 2d.

879 60° **1/0** Post 2d.



No. 43
6 in. rule
64ths & m/m.

Depth Gauge.
British made.
4/6 Post 2d.

Plain Depth Gauges.
Pocket rule type.

1341 1/16, 1/32, 1/64 and m/m

1222 1/20, 1/32 in.

4 in. **1/6,** 6 in. **2/-** Post 2d.

GAUGES

HALF-INCH MICROMETERS

up to ½ in. decimal equivalents.

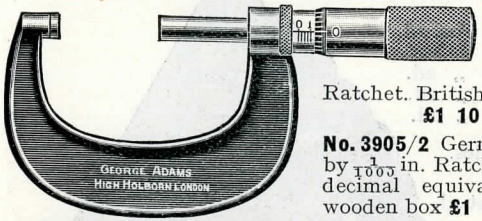
215 Starretts, $\frac{1}{1000}$ in.	**£2 3 0**	Post 3d.	Case **4/9**
219 ditto $\frac{1}{10000}$ in.	**£3 2 0**	ditto	ditto
3905/½ in. German $\frac{1}{1000}$ in.	**£1 0 0**	ditto	

ONE INCH MICROMETERS

up to 1 in. decimal equivalents.

No. 3 Starretts, by $\frac{1}{1000}$ in.	**£2 10 9**	Post 4d.	Case **5/-**
No. 113 Starretts, up to 1 in. by $\frac{1}{10000}$ in., decimal equivalents	**£2 19 6**	ditto	ditto
961 British made up to 1 in. by $\frac{1}{1000}$ in., ratchet and locknut, in case	**£1 10 0**	Post 4d.	
961B do. do. $\frac{1}{10000}$ do. do. do.	**£1 15 0**	do.	
3905/1 German do. $\frac{1}{1000}$ do. do. do.	**£1 2 0**	do.	

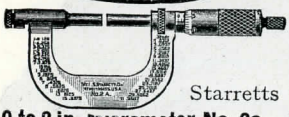
TWO INCH MICROMETERS



No. 966 1 to 2 in. by $\frac{1}{1000}$ in. Ratchet. British made **£1 10 0** Post 6d.

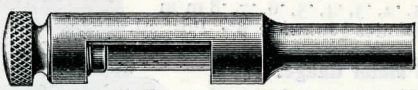
No. 3905/2 German 1 to 2 in. by $\frac{1}{1000}$ in. Ratchet and lock, decimal equivalents. In wooden box **£1 7 0** Post 6d.

No. 206 Micrometer Stand 16/6 Post 6d.

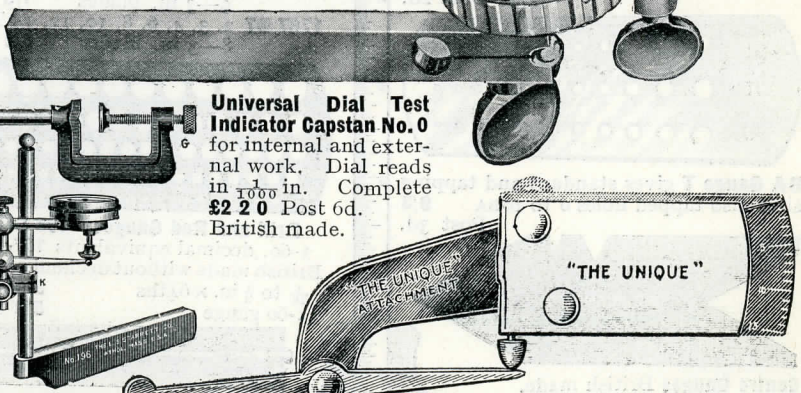


Starretts

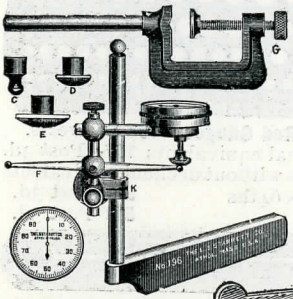
0 to 2 in. Micrometer No. 2a in $\frac{1}{000}$ in. **£3 10 9** Case **6/6**

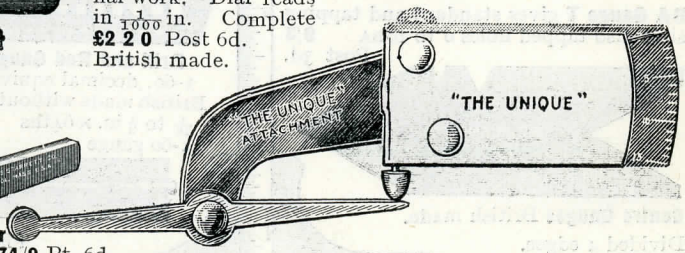


Attachment 212 for 2 in. Micrometer. This converts a 2 in. Micrometer into a 1 in. one and is included in the 2a Micrometer.



Universal Dial Test Indicator Capstan No. 0 for internal and external work. Dial reads in $\frac{1}{1000}$ in. Complete **£2 2 0** Post 6d. British made.





196 Dial Test Indicator

A. Complete ...	**74/9**	Pt. 6d.
B. Indicator and 3 points ...	**49/-**	,, 4d.
F. Hole Attachment	**10/-**	,, 2d.
G. Clamp ...	**5/-**	,, 3d.
H. Tool Post ...	**5/-**	,, 4d.
K. Sleeve ...	**5/-**	,, 2d.

Unique Test Indicator with internal attachment. This has a clamp plate at back by means of which the indicator can be attached to a calliper leg, scribing block or to a lathe tool.

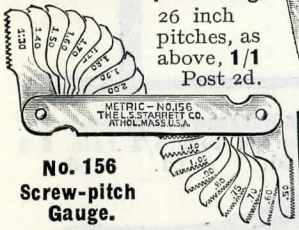
Unique Test Indicator without inter. attach. **3/6** Pt. 2d.

Internal attachment only without indicator **2/9** do.

SCREW PITCH GAUGES

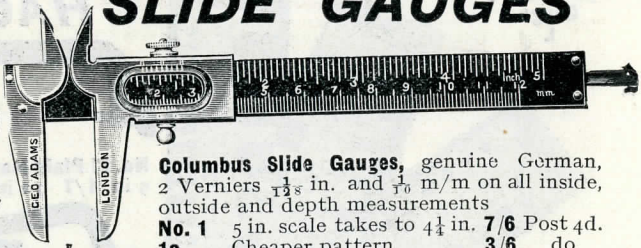
No. 7W Screw-pitch Gauge.
26 inch pitches.
4, 4½, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 40, 48, 60 **7/6** Post 2d.

No. 550 Screw-pitch Gauge.
26 inch pitches, as above, **1/1** Post 2d.

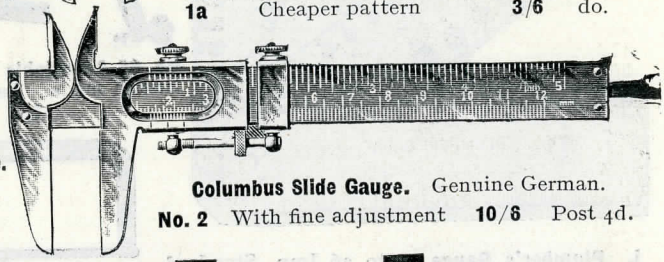


No. 156 Screw-pitch Gauge.
28 metric pitches.
·25, ·3, ·35, ·4, ·45, ·5, ·55, ·6, ·65, ·7, ·75, ·8, ·85, ·9, 1, 1·1, 1·2, 1·25, 1·3, 1·4, 1·5, 1·6, 1·7, 1·75, 1·8, 1·9, 2, 2·5 m/m
5/9 Post 2d.

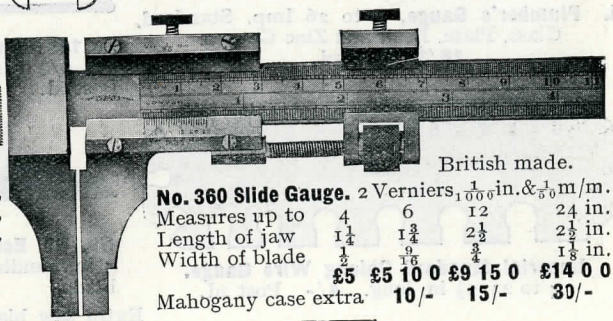
SLIDE GAUGES



Columbus Slide Gauges, genuine German, 2 Verniers $\frac{1}{128}$ in. and $\frac{1}{10}$ m/m on all inside, outside and depth measurements
No. 1 5 in. scale takes to 4¼ in. **7/6** Post 4d.
1a Cheaper pattern **3/6** do.

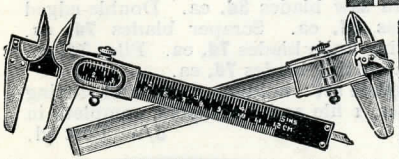


Columbus Slide Gauge. Genuine German.
No. 2 With fine adjustment **10/6** Post 4d.

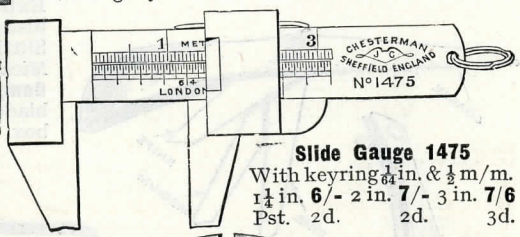


British made.
No. 360 Slide Gauge. 2 Verniers $\frac{1}{1000}$ in. & $\frac{1}{50}$ m/m.

Measures up to	4	6	12	24 in.
Length of jaw	1¼	1¾	2½	2½ in.
Width of blade	½	9/16	¾	1⅛ in.
	£5	**£5 10 0**	**£9 15 0**	**£14 0 0**
Mahogany case extra		**10/-**	**15/-**	**30/-**

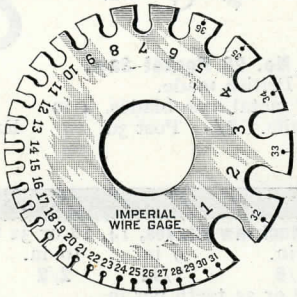


No. 5935 Slide Gauge with detachable Depth Rod.
This is similar to the Columbus above but has the advantage that the depth rod can be disengaged when not required. **6/-** Post 4d.



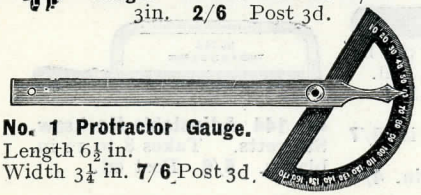
Slide Gauge 1475
With keyring $\frac{1}{64}$ in. & ½ m/m.
1¼ in. **6/-** 2 in. **7/-** 3 in. **7/6**
Pst. 2d. 2d. 3d.

No. 1313 Brass Pocket Slide Gauge. Marked ins. and m/m 3in. **2/6** Post 3d.



Wire Gauges
KD 1-36 I.S. with decimal equivalents.
10/- Post 3d.

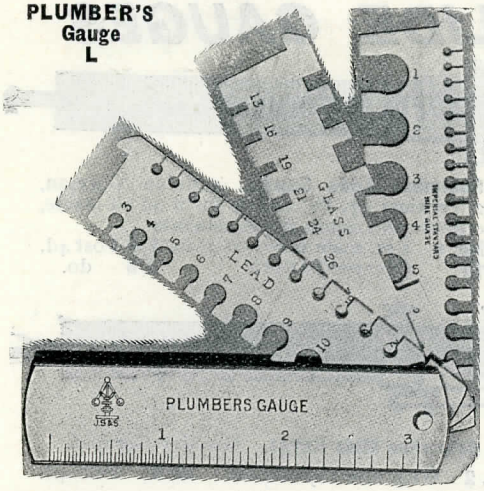
I.S.
4 to 24 I.S.
2 in. diam.
4/6 Post 2d.



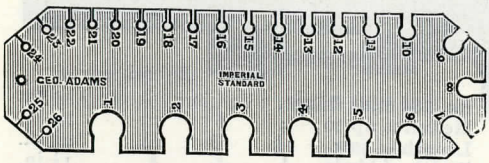
No. 1 Protractor Gauge.
Length 6½ in.
Width 3¼ in. **7/6** Post 3d.

Imperial Standard Wire Gauges.
Single Circular.

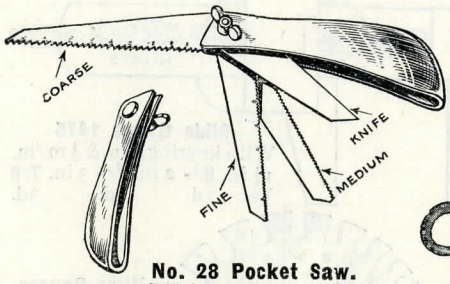
PLUMBER'S Gauge L



L Plumber's Gauge, 1 to 26 Imp. Standard, Glass, Plate, Lead and Zinc Gauges. **16/3** Post 3d.



Imperial Standard Oblong Wire Gauge. 4 to 24, 2½ in. long. **4/-** Post 2d.



No. 28 Pocket Saw. British made. 5 in. holder, 3 metal saw blades, 4 in. long, and knife. **3/-** Post 3d.

HACKSAWS

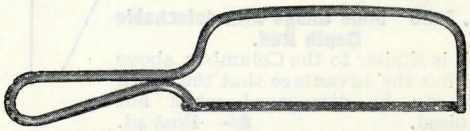
No. 21 Plain Hacksaw Frame, British made. 9 in. **1/7** 10 in. **1/8** 12 in. **1/9** Post 6d.

No. 66 Adjustable Hacksaw. British made. Takes 8 to 12 in. blades. **1/7** Post 6d.

No. 143 Plain Hacksaw Frame. Starretts. 8 in. **4/3** 9 in. **4/6** 10 in. **5/3** 12 in. **5/6**
Post 6d. 6d. 6d. 9d.

No. 4S Eclipse Tool. British made. 5 in. handle and one 3½ in. metal saw blade. **2/6** Post 3d.

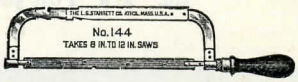
Extra saw blades **3d.** ea. Double-edged blades **3d.** ea. Scraper blades **7d.** ea. Slitting knife blades **7d.** ea. Files **7d.** ea. Mica cutting blades **7d.** ea.
Complete set: holder, 13 saw and slitting blades, 1 file and 2 scrapers, complete in box. **5/-** Post 4d.



Midget Hacksaw Frame. British made. Takes hacksaw blades 6 in. by ¼ in. With blade **1/4** Post 3d. Extra hacksaw blades, 6 in. by ¼ in. deep, per doz. **1/3** Post 2d.

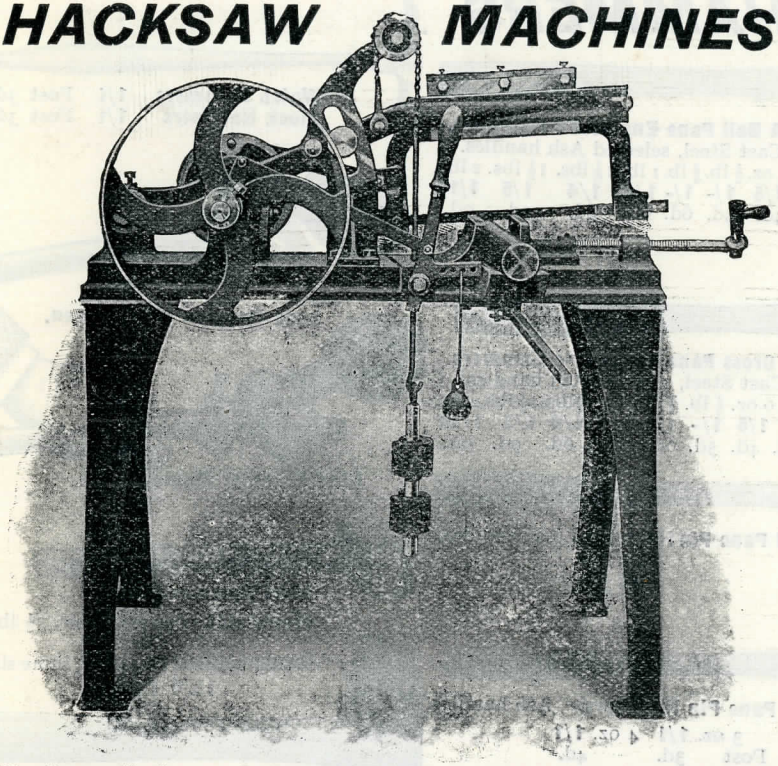
British made **Hacksaw Blades,** 14, 18 or 32 teeth per in.

	8 in.	9 in.	10 in.	12 in.
Stiff, doz.	**1/8**	**1/11**	**2/2**	**2/7**
Flexible, 14, 18 or 32 teeth per in. doz.	8 in. **1/8**	9 in. **1/11**	10 in. **2/2**	12 in. **2/7**
Machine Blades, 6, 10 or 14 teeth per in. doz.			10 in. **2/7**	12 in. **3/1** 14 in. **4/-**



No. 144 Adjustable Hacksaw, Starretts. Takes 8 to 12 in. blades. **5/6** Post 6d.

HACKSAW MACHINES



B¹ Power Hacksaw. Capacity $4\frac{1}{2} \times 4\frac{1}{2}$ in. Weight 196 lbs. **£7 10 0**

B² do. $4\frac{1}{2} \times 4\frac{1}{2}$ in. Weight 212 lbs. **£9 17 6**

B³ do. $6\frac{1}{2} \times 6\frac{1}{2}$ in. Weight 238 lbs. **£11 7 6**

Packing for export **40/-** extra.
Case $24 \times 22 \times 42$ in.

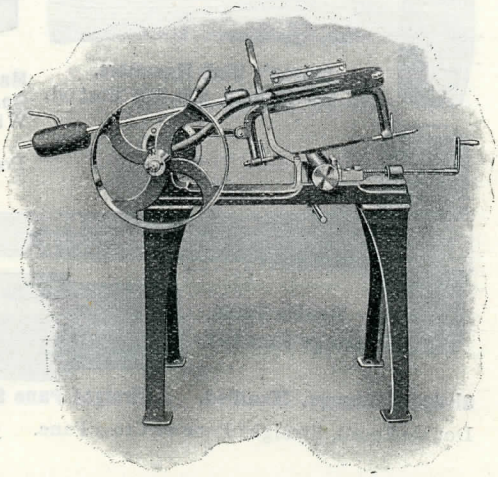
C Pattern has swivel vice.

C¹ takes $4\frac{1}{2} \times 4\frac{1}{2}$ in. Weight 196 lbs. **£8 5 0**

C² takes $4\frac{1}{2} \times 4\frac{1}{2}$ in. Weight 212 lbs. **£10 12 6**

C³ takes $6\frac{1}{2} \times 6\frac{1}{2}$ in. Weight 238 lbs. **£12 2 6**

Packing for export **40/-** extra.
Size of case $24 \times 22 \times 42$ in.
Size of pulley B¹, B², C¹, C², $14 \times 2\frac{1}{2}$ in.
Size of pulley B³, C³, 14×3 in.
Revolutions 48 to 60 p.m.
British made.

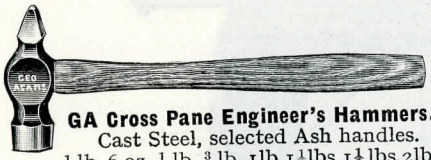


D¹ Power Hacksaw.
Capacity 5×5 in. Weight 155 lbs. Pulley $14 \times 2\frac{1}{2}$ in. Revs. 60 to 70. **£5 5 0**
Packing for export **40/-** extra.
Case $38 \times 22 \times 23$ in.

HAMMERS

GA Ball Pane Engineer's Hammers.
Cast Steel, selected Ash handles.

	¼ lb.	6 oz.	½ lb.	¾ lb.	1 lb.	1¼ lbs.	1½ lbs.	2 lbs.
	1/5	**1/5**	**1/-**	**1/-**	**1/1**	**1/4**	**1/5**	**1/10**
Post	4d.	4d.	5d.	6d.	6d.	6d.	9d.	9d.



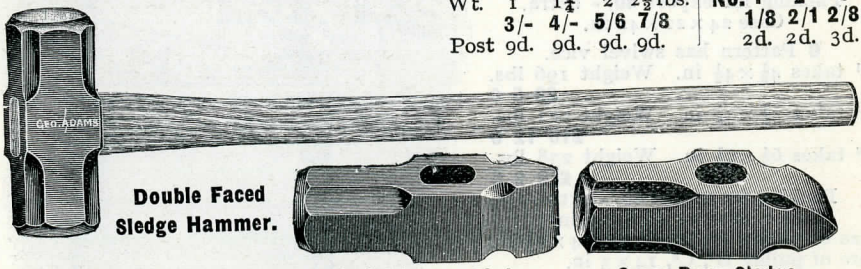
GA Cross Pane Engineer's Hammers.
Cast Steel, selected Ash handles.

	¼ lb.	6 oz.	½ lb.	¾ lb.	1 lb.	1¼ lbs.	1½ lbs.	2 lbs.
	1/5	**1/5**	**1/-**	**1/-**	**1/1**	**1/4**	**1/5**	**1/10**
Pt.	4d.	4d.	5d.	6d.	6d.	6d.	9d.	9d.

Ball Pane Pin Hammers. Ash handles.
3 oz. **1/1**
Post 3d.

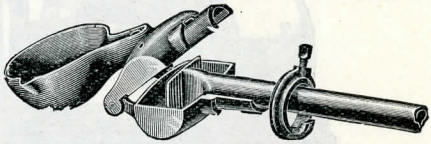
Cross Pane Pin Hammers. Ash handles.
3 oz. **1/1** 4 oz. **1/1**
Post 3d. 4d.

Mason's Club Hammers.
2 lb. **2/-** Post 9d. 3 lb. **2/6** Post 9d.

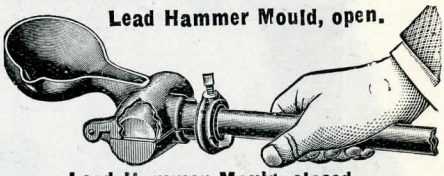


Double Faced Sledge Hammer.

Watch Hammers **1/1** Post 3d.
Clock Hammers **1/1** Post 3d.



Lead Hammer Mould, open.



Lead Hammer Mould, closed.

Lead Hammer as cast.

Mould with Lead Hammer, 3½ lbs.
18/- Post 1/-
Mould without Hammer, same size
11/6 Post 9d.

Hide Faced Hammers.

Hammers, complete.

No.	**1**	**2**	**3**	**4**
Wt.	1	1¼	2	2½ lbs.
	3/-	**4/-**	**5/6**	**7/8**
Post	9d.	9d.	9d.	9d.

Extra pairs of faces for

No.	**1**	**2**	**3**	**4**
	1/8	**2/1**	**2/8**	**3/6**
	2d.	2d.	3d.	3d.

Sledge Hammers. Handled.

Straight Pane Sledge.

Cross Pane Sledge.

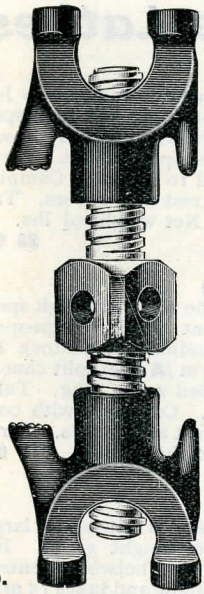
Double Faced, Straight Pane or Cross Pane. 5 lb. **5/6** 7 lb. **7/-** 10 lb. **9/-**

Hickory Hammer Handles.

Hickory Hammer Handles.

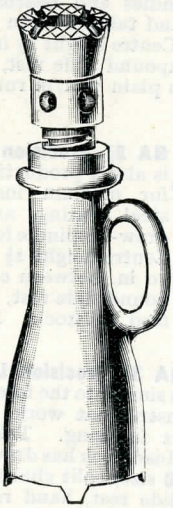
10 in.	12 in.	14 in.	16 in.	18 in
4d.	**4½d.**	**5d.**	**6d.**	**7d.**
Pt. 2d.	3d.	3d.	4d.	4d.

LIFTING JACKS



No. 230 Push and Pull Jacks.

6	8	10	12	14 in.
6/3	**8/6**	**12/9**	**18/3**	**26/9**



No. 240 Bottle Jack.

$1\frac{1}{2}$ tons	..	**8/-**
2 ,,	..	**10/3**
3 ,,	..	**11/3**
4 ,,	..	**13/9**

KNURLS

No. 1 Flat Straight, fine, medium, coarse. $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. **1/6** each.

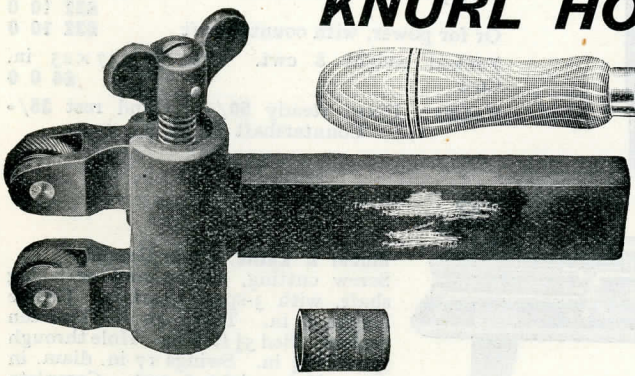
No. 2 Flat Cross, fine, medium, coarse. $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. **1/6** each.

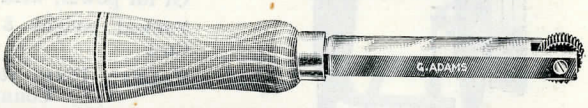
No. 3 Hollow Straight, fine, medium, coarse. $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. **1/6** each.

No. 5 Convex Straight, fine, medium, coarse. $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. **1/6** each.

No. 7 Flat Diamond, fine, medium, coarse. $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. **1/6** each.

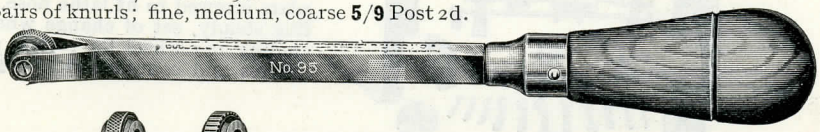
KNURL HOLDERS





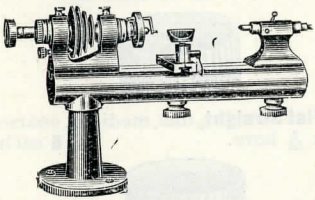
GA Knurl Holder.
Shank $\frac{5}{8} \times \frac{3}{8}$ in. Can be used as slide rest knurl holder by removing handle. Takes knurls $\frac{5}{8} \times \frac{1}{4} \times \frac{3}{16}$ bore. Price holder only, no knurl **2/6** Post 4d.

Billings' Slide Rest Knurlholder with one pair knurls
36/- Post 9d.
Extra pairs of knurls; fine, medium, coarse **5/9** Post 2d.

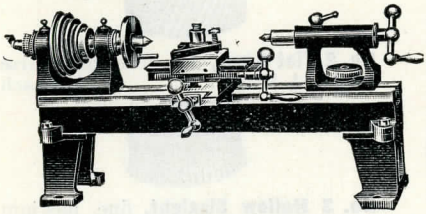


Hand Knurlholder, No. 95 with three Knurls
13/- Post 5d.
Extra knurls **2/9** each. Post 2d.

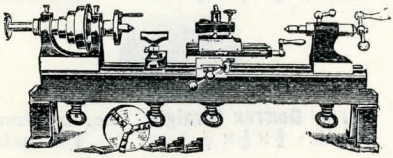
High Class British Made Lathes.



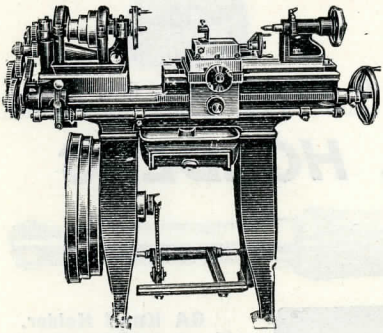
GA 1½ Precision Lathe.
This is essentially a production lathe to run at very high speeds for small instrument work. It has high-speed steel spindles and bearings. Headstock has draw-in spindle and takes 6 m/m (**L** size) split chucks. Nickel plated. Centre height 1½ in. Bed 10 in. long. Complete with compound slide rest, hand rest and 2 Tees. Tailstock has plain 7 m/m runner. Net weight 9½ lbs.
£8 0 0



GA 2½ Precision Lathe
is also a production lathe to run at high speed for medium instrument work. High-speed steel bearings and spindles. Headstock has draw-in spindle for 8 m/m (**A** size) split chucks. Centre height 2½ in. Bed 20 in. long. Takes 10 in. between centres. Complete with compound slide rest, hand rest and 2 Tees. Screw feed tailstock. Net weight 33 lbs. **£18 0 0**



GA 3½ Precision Lathe
is similar to the foregoing and is suitable for larger instrument work. Centre height 3½ in. Bed 32 in long. Takes 18 in. between centres. Headstock has draw-in spindle and takes 15 m/m (**C** size) split chucks. Complete with compound slide rest, hand rest and 2 Tees. Screw feed tailstock. Net weight 1 cwt. **£22 10 0**

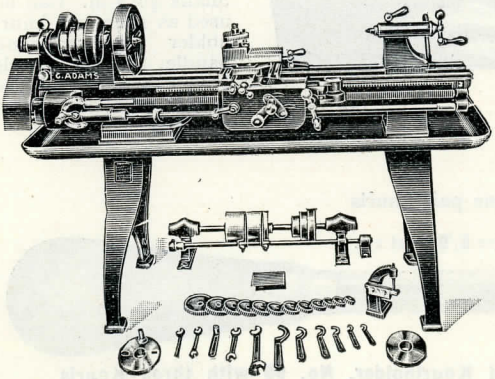


Model H 5½ in. **Back-geared Screw Cutting Lathe.**
Centre height 5½ in Bed 3½ ft. long. Hole through spindle $\frac{9}{16}$ in. Takes 21 in. between centres. Swings in gap 17 in. diam. All slides graduated to read in $\frac{1}{1000}$ in.
Complete with 11 change wheels on stand for foot power, as illustrated. Net weight 5½ cwt.
£32 10 0

Or for power, with countershaft **£32 10 0**

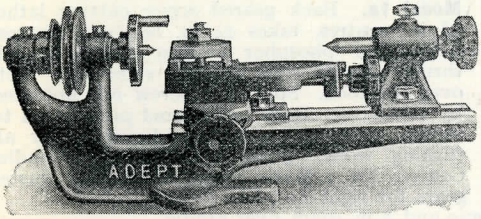
Packed weight 8 cwt. Case 75 × 47 × 25 in. Cost **£4 0 0**

Extras: Fixed steady **50/-**; Hand rest **35/-**
Countershaft **£5 10 0**



Model L Lathe, Back Geared.
Screw cutting, sliding and surfacing shaft, with 3-speed gearbox. Centre height 6 in. Takes 40 in. between centres. Bed 5¼ ft. long. Hole through spindle 1¼ in. Swings 17 in. diam. in gap. Net weight 6 cwt. Complete with face plate, driver plate, chuck plate screwed to fit lathe nose, travelling steady, set of change wheels, including 127 wheel for metric pitches, centres and countershaft. **£40 0 0**

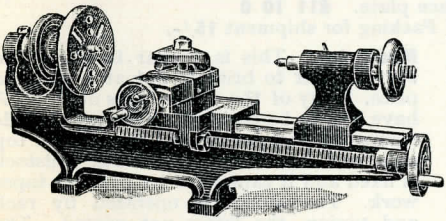
British made Amateur Lathes



Model PA

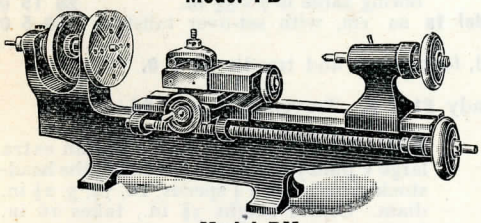
Model PA. Miniature Lathe. $1\frac{5}{8}$ in. centres. Takes 6 in. between centres. Overall length $11\frac{1}{4}$ in. Swings 4 in. in gap. Nose screwed $\frac{3}{8}$ in. BSF. Weight 6 lbs. With compd. slide rest.

With plain runner tailstock	**£1 0 0**
,, screw feed tailstock	**£1 5 0**
Extras: 2-speed foot wheel	**£1 0 0**
Bell chuck, 3 screw to $\frac{1}{2}$ in.	**4/6**
$3\frac{1}{4}$ in. face plate **3/-**; hand rest **2/-**	
Belt **1/6**; wood stand, with flywheel and treadle.	**£1 2 6**



Model PB

Model PB. $2\frac{1}{8}$ in. centres. Takes 10 in. between centres. Centres No. 0 Morse taper. 2-speed cone. $3\frac{3}{8}$ in. face plate. Screw feed tailstock. Swings $5\frac{1}{2}$ in. in gap. Bore of spindle $\frac{1}{4}$ in. Net weight 25 lbs. **£2 15 0**
Single slide slide rest travels whole length of bed.
Extras: 3-screw bell chuck to $\frac{3}{8}$ in. **6/-**; 2-speed foot wheel, weight 18 lbs. **£1 5 0**; hand rest **4/6**; packing for shipment **5/-**



Model PM

Model PM. $2\frac{1}{8}$ in. centres. Takes 12 in. between centres. Centres No. 0 Morse taper. 3-speed cone. Screw feed tailstock. Swings $5\frac{1}{2}$ in. in gap. Bore of spindle $\frac{1}{4}$ in. Double slide compd. slide rest travels whole length of bed. Net weight 25 lbs. As illustrated **£4 5 0**

Extras: bell chuck **6/-**; hand rest	**4/6**
3-speed foot wheel, 18 lbs.	**32/6**
takes $\frac{1}{4}$ in. slide rest tools.	
Packing for shipment	**5/-**

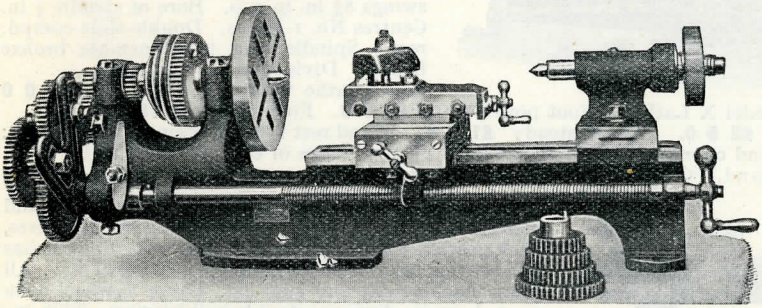


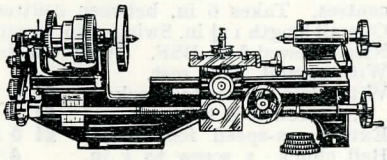
Illustration shows Model PXL, with double slide compd. rest, 6-in. face plate, complete for Bench. Overall length 30 in.

3-inch Centres Back Geared Screw Cutting Lathes.
Split G/M bushes to spindle. Hole through spindle $\frac{3}{8}$ in. Gap bed swings 8 to 9 in. 10 change wheels. Mandrel nose $\frac{3}{4}$ in. BSF.

Model **PS** Single slide slide rest. $12\frac{1}{2}$ in. between centres.					
For Bench, net weight 42 lbs. **£6 16 0**	On treadle stand, net weight 1 cwt.				**£11 0 0**
Model **PX** Single slide slide rest.	For Bench $12\frac{1}{2}$ in.	between	centres.		**£7 16 0**
	18 in.	do.	do.		**£9 6 0**
Model **PXL** Double slide compd. rest.	For Bench $12\frac{1}{2}$ in.	do.	do.		**£10 10 0**
	18 in.	do.	do.		**£12 0 0**

Extras:
Foot power stand, $12\frac{1}{2}$ in. size **£4 4 0**; 18 in. size **£4 12 0**; 65 wheel for metric **7/9**; 3-speed foot wheel, 46 lbs. **£2 15 0**; bell chuck to 1 in. **8/6**; power countershaft **£2 15 0.**
3 in. lathes take $\frac{5}{16}$ in. turning tools. Models PS and PX have $4\frac{3}{8}$ in. face plates.
Packing for shipment:
$12\frac{1}{2}$ in. bench size **7/6**; 18 in. bench size **10/-**; $12\frac{1}{2}$ in. on treadle stand **15/-**

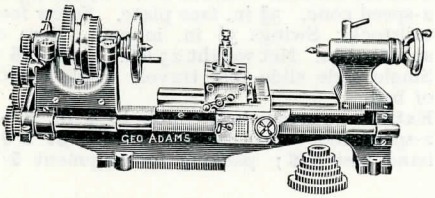
BRITISH MADE AMATEUR LATHES



1a

Model 1a. Back geared screw cutting lathe. $3\frac{3}{4}$ in. centres, takes 14 in. between centres. Adjustable phosphor bronze bearings, ball thrust, double slide compd. slide rest. Set-over tailstock. Split lead screw nut operated by cam lever. Rack and geared pinion feed to saddle, quite a wonderful advantage for all turning work. $\frac{3}{8}$ in. hole through spindle. Centres No. 1 Morse taper. Reversing cluster gears for right and left screw.

Overall length 36 in. Swings $10\frac{1}{2}$ in. in gap and 5 in. diam. over saddle. Boring table $6 \times 3\frac{3}{4}$ in. Spindle nose 1 in. B.S.F. Takes a tool holder with shank $\frac{5}{8}$ in. deep.
Model 1a. 11 change wheels, 6 in. slotted face plate. **£11 10 0**
Net weight 90 lbs. Gross weight $1\frac{1}{4}$ cwt. Packing for shipment **15/-.**

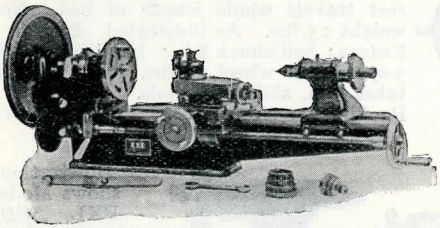


1m

Model 1m. This is similar to Model 1a, but in order to bring it out at a reduced price, many of the advantages of Model A have had to be omitted. The double slide compound rest is replaced by a single top slide rest. See illustration. The tailstock is fixed and it cannot be set over for taper work. The saddle is operated by rack and pinion, the latter not geared. The boring table is $7 \times 3\frac{3}{4}$ in. **£8 15 0**

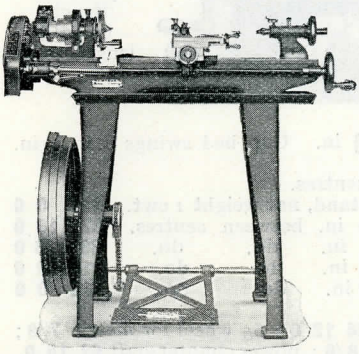
Model 1s as 1m, with set-over tailstock **£9 5 0**

Extras for Model 1 Lathes. Lathe stand, foot power and treadle **£4 5 0.**
Foot wheel, weight 45 lbs. **£2 15 0.**
Power countershaft **£2 10 0.** Fixed steady **£1 2 6.** Travelling steady **15/-.**



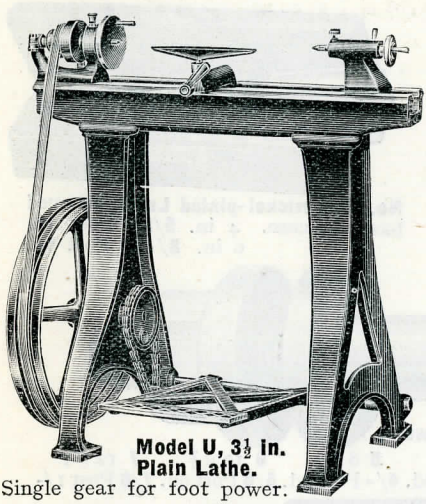
Model X Screw cutting Lathe has an extra large V pulley carried on the tail of the headstock spindle with 4 speeds, 10, $7\frac{1}{2}$, 5, $2\frac{1}{2}$ in. diam. Centre height $3\frac{3}{8}$ in., takes 16 in. between centres. Removable gap piece, swings $8\frac{3}{4}$ in. in gap. Bore of spindle $\frac{1}{2}$ in. Centres No. 1 Morse. Double slide compd. rest. Spindle runs in adjustable bronze bushes. Divided pulley 60 holes.
Bench lathe weight 80 lbs. **£15 0 0**

Extras for Model X Lathes. Foot power stand **£6 5 0.** Foot wheel **£3 15 0.**
Countershaft **£2 5 0.** Fixed steady **£1 7 6.** Hand rest **7/6.** Packing for shipment:
Bench lathe and countershaft. Gross weight $1\frac{3}{4}$ cwt. Size of case $48 \times 15 \times 17$ in. **17/-.**
Lathe and stand. Gross weight 3 cwt. Size of case $38 \times 25 \times 23$ in. **£1 15 0.**



Model U, $3\frac{1}{2}$ in. S.C. Screw cutting Lathe for wood and metal, centre height $3\frac{1}{2}$ in., takes 22 in. between centres, back geared, 3-step cone for 1 in. flat belt. Spindle has ball bearing in front and adjustable bearing at rear. All gears machine cut and guarded. Large flywheel cone 21, $21\frac{1}{2}$, 22 in. diam. on double ball bearing. This ensures ample speed and easy running for wood. Compound slide rest graduated for conical work. Table $6\frac{3}{4} \times 3\frac{1}{2}$ in. Outfit:—Face plate, driver plate, 2 centres and 1 forked, 3 spanners, 10 change wheels, bed 22 in. long, swings over saddle $4\frac{1}{8}$ in., swings in gap $10\frac{1}{2}$ in., bore of spindle $\frac{3}{8}$ in., lead screw $\frac{1}{8}$ in. pitch. Overall length 41 in. Net 280 lbs. Gross weight 360 lbs. Case $46 \times 28 \times 24$ in.
For foot power, as illustrated. **£17 10 0**
For power, with C'shaft on stand net 238 lbs. **£16 10 0**
Bench lathe with C'shaft, net 106 lbs. **£15 10 0**

Extras. C'shaft alone **£2.** Travelling steady **12/6.** Fixed steady **£1.** 63 wheel for metric pitches **5/-.** Hand rest and two tees **15/-.** Treadle belt **7/-.** Packing for shipment **£1 5 0.**
Lathe nose screwed $\frac{7}{8}$ in., 12 threads. Takes No. 1 morse taper.
Slide rest takes $\frac{3}{8}$ in. square tools.



Model U, 3½ in. Plain Lathe.
Single gear for foot power.

British Made Plain Lathes.
This is the most useful type of lathe for all purposes. They run very lightly, as a lathe should for wood and light metal work. The foot wheel is carried on a double ball bearing. The outfit comprises: 2 plain and 1 forked centres, driver plate, hand rest and 3 tees. The front bearing is a ring of heavy balls and the rear is plain split.

Model U, 3½ in. centre height, bed 3 ft. long, takes 2 ft. between centres. Spindle nose ⅞ in. by 12 threads p.i. Centres No. 1 Morse taper. 3-step flat cone, 2, 3 and 4 in. for 1 in. flat belt. Foot wheel steps 21, 21½ and 22 in.
Prices do not include driving belt.

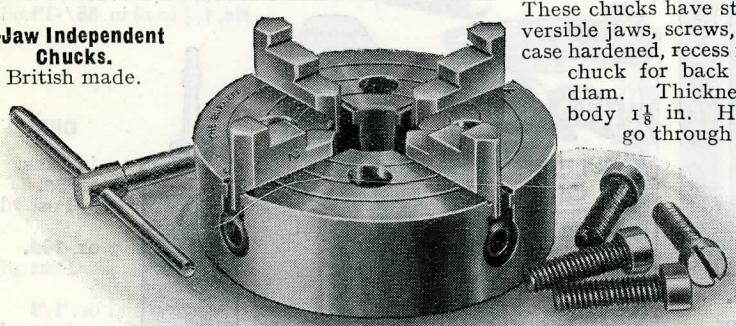
Model U, 3½ in., single geared, as illustrated **£10 0 0**
Net 2 cwt., gross 3 cwt. Case 3½ft. × 2ft. 4in. × 2ft. Cost of packing for shipment **£1**
Single geared, for power only, on stand, and countershaft **£9 0 0**
Bench Lathe, no stand, with countershaft **£8 0 0**

Extras for 3½ in.: countershaft, pulleys, 5 in. × 1¼ in. **£1 15 0**
Compound slide rest **£4 0 0.** Back gearing to headstock **£2 0 0.** Gap to bed **15/-**
Bed 1 ft. longer **15/-** Fixed steady **£1 0 0** Driving belt extra **7/-**

Model U, 5 in. centre height. Bed 4 ft. long. Takes 31 in. between centres. Spindle nose 1 in. by 10 threads. Centres No. 1 Morse taper. 3-step flat cone, 2¾, 4¼ and 5¾ in. for 1¼ in. belt. Foot wheel steps 20, 21 and 22 in. Single geared, net 3 cwt., gross 4 cwt. **£13 10 0**
Cost packing **£1 10 0** Case 4½ × 2½ × 2¼ ft. Bench lathe and countershaft, no stand **£10 15 0**
Single geared for power only, on stand and countershaft **£12 0 0**
Extras for 5 in.: countershaft, 6 in. pulleys for 1½ in. belt **£2 0 0** Compd. slide rest **£5 0 0**
Back gearing to headstock **£2 10 0** Gap to bed **£1 0 0** Bed 1 ft. longer **£1 0 0**
Fixed steady **£1 5 0** Foot power belt **7/6**

Model U, 6 in. centre height. Bed 5 ft. long. Takes 3 ft. between centres. Spindle nose 1¼ in. by 7 threads. Centres No. 2 Morse taper. 3-step flat cone, 4, 6 and 8 in. for 1½ in. belt. Foot wheel steps 19¼, 20¾ and 22¼ in. Single geared, net 4½ cwt., gross 5½ cwt. **£18 0 0**
Cost packing **£2 0 0** Case 5½ × 2½ × 2½ ft. Bench lathe and countershaft, no stand **£14 10 0**
Single geared for power only on stand and countershaft **£16 0 0**
Extras for 6 in.: countershaft, 8 in. pulleys for 1¾ in. belt **£2 10 0** Compd. slide rest **£6 0 0**
Back gearing to headstock **£3 0 0** Gap to bed **£1 5 0** Bed 1 ft. longer **£1 5 0**
Fixed steady **£1 10 0**

4-Jaw Independent Chucks.
British made.

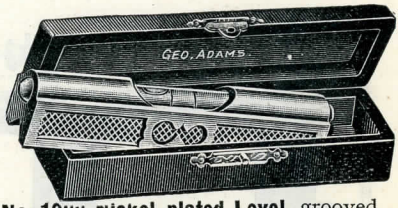


These chucks have steel bodies, reversible jaws, screws, key and jaws case hardened, recess in rear of each chuck for back plate, 2¾ in. diam. Thickness of chuck body 1⅛ in. Holding screws go through face of chuck.

A.	3¼in. diam.	Hole through chuck	¾in.	Takes up to	3½in. diam.	Wt.	2½lbs.	**20/-**	Pst.9d.
B.	4 in.	,, ,, ,, ,,	1in.	,, ,, ,,	4¼in.	,, ,,	3½lbs.	**21/-**	,,9d.
C.	4½in.	,, ,, ,, ,,	1in.	,, ,, ,,	4¾in	,, ,,	4¾lbs.	**25/-**	,, 1/-

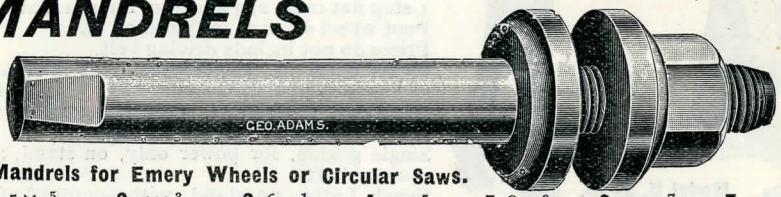
IRON LEVELS

No. 97 Level, Plain vial, grooved base for testing Shafting. Starretts, has cross and horizontal levels, also tube for protecting glass.
6 in. **15/3** Post 6d. 8 in. **18/6** Post 9d.



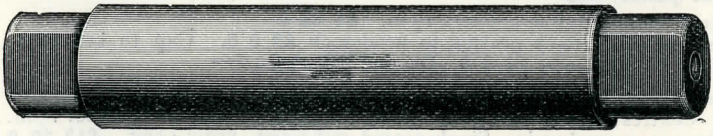
No. 1088 Nickel-plated Level, grooved base, in case. 4 in. **5/3** Post 4d.
6 in. **8/-** Post 6d.

MANDRELS



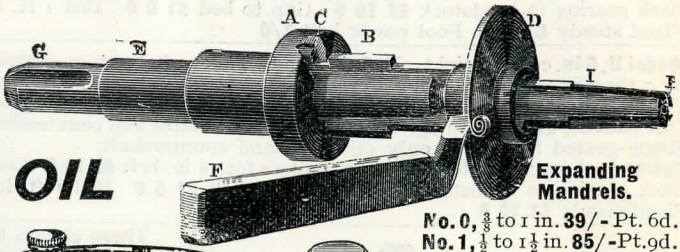
A Mandrels for Emery Wheels or Circular Saws.

1 $5 \times \frac{5}{16}$	**2** $5 \times \frac{3}{8}$	**3** $6 \times \frac{1}{2}$	**4** $7 \times \frac{5}{8}$	**5** $8 \times \frac{3}{4}$	**6** $10 \times \frac{7}{8}$	**7** 12×1
1/9 Post 3d.	**1/11** Post 3d.	**2/7** Post 5d.	**3/-** Post 6d.	**4/-** Post 9d.	**5/6** Post 9d.	**7/6** Post 1/-



Cast Steel hardened and ground Mandrels.

$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1 in. diam.
2/9	**3/3**	**3/8**	**4/-**	**4/6**	**4/11**	**5/5**	**5/9**	**6/2**	**6/9**	**7/-**	**7/10**	**8/5**
Post 2d.	2d.	2d.	2d.	3d.	3d.	4d.	5d.	5d.	6d.	6d.	6d.	6d.



Expanding Mandrels.
No. 0, $\frac{3}{8}$ to 1 in. **39/-** Pt. 6d.
No. 1, $\frac{1}{2}$ to $1\frac{1}{2}$ in. **85/-** Pt. 9d.

3 in 1 Oil.

Cans 1oz.	$3\frac{1}{2}$oz.	
8d.	**1/3**	
Post 2d.	4d.	
Bottles 3oz.	8oz.	
1/3	**2/6**	
Post 5d.	6d.	

OIL

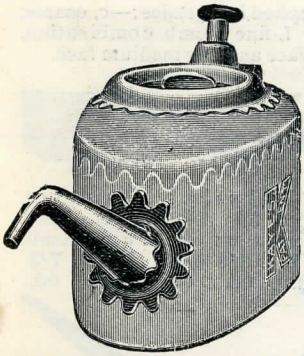
Price's Oil in Cans.

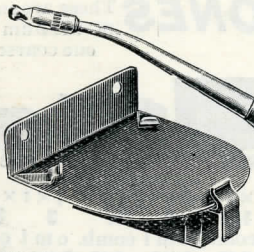
7oz.	Pint	Qrt.	$\frac{1}{2}$gall.	1gall
8d.	**1/6**	**2/10**	**4/3**	**7/-**
Pt. 6d.	9d.	1/-	1/3	rail

Watch Oil 9d. Post 2d.
Clock Oil 9d. Post 2d.

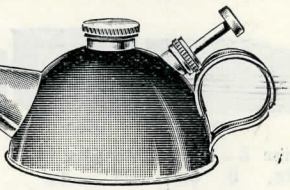
Oilit
in cans.
1 oz. **8d.** Post 2d
2 oz. **10d.** Post 3d.
4 oz. **1/3** Post 3d.
Pint **3/-** Post 9d.
Quart **4/6** Post 1/-

OIL CANS





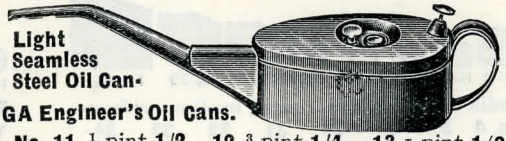
Clip Tray for No. 36 Oil Can 1/- Post 2d.



No. 36 Small Pump Oil Cans.
Tin **4/-** Post 5d.

Kaye's Engineer's Oil Cans with fixed spouts.

	No. 5B	6B	16	17
Contains	⅛	¼	⅓	½ pt.
Steel body, Tin Spout	2/-	2/3	2/6	2/10
Steel body, Copper Spout	2/1	2/4	2/8	3/-
Post	4d.	4d.	5d.	6d.

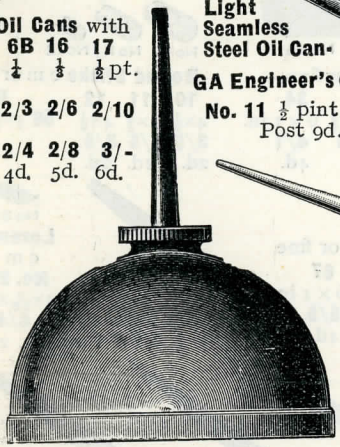


Light Seamless Steel Oil Can.

GA Engineer's Oil Cans.

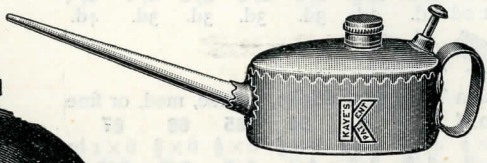
No. 11 ½ pint **1/2** Post 9d. **12** ¾ pint **1/4** 9d. **13** 1 pint **1/8** 9d.

No. 100 Small Upright Machine Oil Can. 6d.
Post 3d.



Coppered Steel.

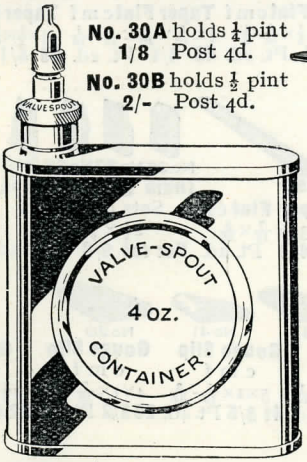
Upright Coppered Steel Oil Cans.



Engineer's Forced Feed Oil Cans.

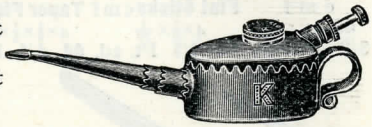
Steel body	300	310	320	330	340
Contains	¼	⅓	½	¾	1 pt.
	4/4	4/8	5/-	5/10	6/8
Copper body	31	31c	32c	33c	34c
	6/-	6/6	7/6	8/6	10/-
Post	4d.	5d.	6d.	6d.	6d.

No. V.T.4

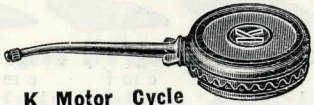


No. 30A holds ¼ pint **1/8** Post 4d.

No. 30B holds ½ pint **2/-** Post 4d.



No. 290 Small Pump Oil Can.
Powerful jet, holds ⅙ pint.
Steel body **4/-** Post 3d.
Steel Bracket for same **1/4** Post 2d.
No. 28 Copper body **5/6** Post 3d.

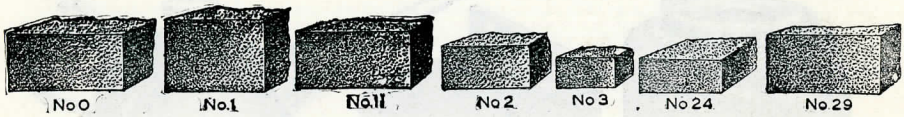


K Motor Cycle Oil Cans 1/9 Post 2d.

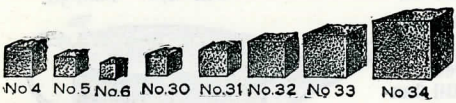
VT4 holds 3 oz. **1/-** post 3d. **VT8** holds 4 oz. **1/6** post 3d.
VT5 holds 5 oz. **1/3** post 3d.
VT Oil Cans have a patent spout which cannot leak. One turn of this valve and the can is ready for use. A turn back and it is sealed hermetically. Good for spirits as well as oil.

INDIA OILSTONES

These are supplied in 3 grades :—c, coarse; m, medium ; f, fine ; comb. combination, one coarse face and one medium face.



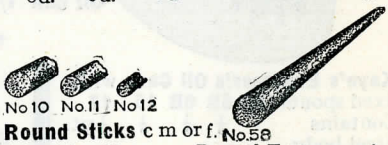
No 0	No. 1	No. 11	No 2	No 3	No 24	No 29
Size 8 × 2 × 1	8 × 1¾ × 1¼	7 × 2 × 1	6 × 1⅝ × ¾	4 × 1 × ½	4½ × 1½ × ⅝	6 × 2 × 1 in.
No. 0 0c	**1 1c**	**1½ 1½c**	**2 2c**	**3 3c**	**24 24c**	**29 29c**
c m f comb.	c m f comb.	c m f comb.	c m f comb.	c m f comb.	c m f comb.	c m f comb.
7/3 9/8	**8/6 10/11**	**6/- 8/6**	**4/10 6/6**	**2/11 4/1**	**3/8 4/10**	**5/7 7/3**
Pst. 9d. 9d.	6d. 6d.	6d. 6d.	6d. 6d.	6d. 6d.	6d. 6d.	6d. 6d.



No 4 No 5 No 6 No 30 No 31 No 32 No 33 No 34

India Square Sticks, coarse, medium or fine.

No. 4	5	6	30	31	32	33	34
4 × ½	4 × ⅜	4 × ¼	6 × ⅜	6 × ½	6 × ⅝	6 × ¾	6 × 1 in.
2/5	**2/5**	**2/5**	**3/5**	**3/5**	**3/5**	**4/1**	**4/1**
Pt. 2d.	2d.	2d.	3d.	3d.	3d.	3d.	4d.



No 10 No 11 No 12 No 58

Round Sticks c m or f.

10	11	12
4 × ½	4 × ⅜	4 × ¼
3/5	**3/5**	**3/5**
2d.	2d.	2d.

Round Taper c m f
58 4 × ½ × ¼ in. **4/1** Pt. 2d.

No 7 No 8 No 9

India Triangular Sticks, coarse, med. or fine.

No. 7	8	9	64	65	66	67
4 × ½	4 × ⅜	4 × ¼	6 × ½	6 × ⅝	6 × ¾	6 × 1 in.
3/2	**3/2**	**3/2**	**4/1**	**4/7**	**4/7**	**5/5**
Pt. 3d.	3d.	2d.	3d.	3d.	3d.	4d.

No. 26 No 27 No 28

Lozenge Points c m f
No. 26 4 × 9/16 × 3/16
No. 27 3 × 5/16 4/4
Knife No. 28 c m f
4 × 1 × ⅛ **3/5**
Pt. 2d. Pt. 2d. Pt. 2d. Pt. 4d.

No. 57
Triangular Taper c m f.
57 4 × ½ × ¼ **4/1** Pt. 2d.

No. 42 **India Flat Sticks** c m f
42 4 × 1 × ¼
3/2 Pst. 2d.

No. 43 **Flat Sticks** c m f
4 × ½ × 1/16
43 4/1 Pt. 2d.

No. 44 **Taper Flat** c m f
4 × ½ × ¼ × 5/16 - ⅛
44 4/1 Pt. 2d.

No. 45 **Taper Flat** c m f
4 × 5/16 × 3/16 × 5/16 - 1/16
45 4/1 Pt. 2d.

No. 46 **Taper Flat** c m f
4 × ½ × ¼ × 5/16 - ⅛
46 4/1 Pt. 2d.

No. 47 **Taper Flat** c m
4 × ½ × 3/16 × 3/16 - 1/16
47 4/1 Pt. 2d.

No. 48 **Taper Flat** c m f
4 × ⅜ × 3/16 × ⅛ - 1/16
48 4/1 Pt. 3d.

No. 49 **Taper Flat** c m f
4 × ⅝ × 3/16 × ⅛
49 4/1 Pt. 3d.

No. 50 **Taper Flat** c m f
3½ × 7/16 × 3/16
50 4/1 Pt. 2d.

No. 36 No. 37 No. 38 No. 39
India Carver's Slips. Sets of 4 c m f
2¼ × ⅞ × 3/16
Per set 9/8 Post 4d.

No 21 **Taper Curved Gouge Slips,** fine.
6 × 2 × 1 × ⅜ - 3/16
21 7/3 Post 5d.

No 13 **Gouge Slip** c m f
4½ × 1¾ × ½ - 3/16
13 3/2 Pt. 3d.

No 14 **Gouge Slip** c m f
4½ × 1¾ × ⅜ - ⅛
14 3/2 Pt. 3d.

No 15 **Gouge Slip** c m f
4½ × 1¾ × ¼ - 1/16
15 3/2 Pt. 4d.

No 41 **Gouge Slip** c m f
5 × 1 × 5/16 - 3/32
41 3/5 Pt. 4d.

No 20 **Gouge Slip** c m f
4 × 1 × 7/16 - 3/16
20 3/2 Pt. 3d.

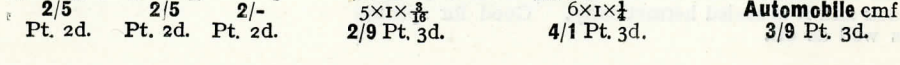
No. 22 **Gouge Slips** c m f
4½ × 2¼ × ⅝ - 5/16
22 4/10 Pt. 4d.

No. 22½ c m f
6 × 2¼ × ¾ - ⅜
22½ 6/- Pt. 4d.

No 23 No. 25 No. 40

Reamer Stones, c m f

3½ × ¾ × 3/16 - ⅛	4½ × 1 × 5/16	2 × 1 × ¼
2/5	**2/5**	**2/-**
Pt. 2d.	Pt. 2d.	Pt. 2d.

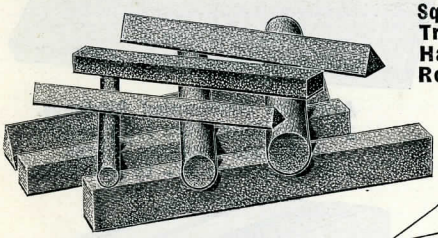


No. 56
5 × 1 × 3/16
2/9 Pt. 3d.

No. 56i
6 × 1 × ¼
4/1 Pt. 3d.

No. 53
Automobile c m f
3/9 Pt. 3d.

CARBORUNDUM OILSTONES

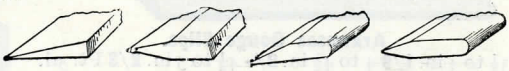


Carborundum Sticks.

Carborundum Sticks.

		Length 4 in. by $\frac{1}{4}$, $\frac{3}{8}$ or $\frac{1}{2}$ in.	$\frac{5}{8}$ or $\frac{3}{4}$ in.	Length 6 in. by $\frac{1}{4}$, $\frac{3}{8}$ or $\frac{1}{2}$ in.	$\frac{5}{8}$ or $\frac{3}{4}$ in.
Square	each	**1/9**	**2/-**	**2/6**	**2/9**
Triangular	,,	**2/3**	**2/6**	**3/-**	**3/6**
Half Round	,,	**2/3**	**2/6**	**3/-**	**3/6**
Round	,,	**2/6**	**2/9**	**3/6**	**3/9**
	Post	3d.	3d.	3d.	3d.

Carborundum Carver's Slips.

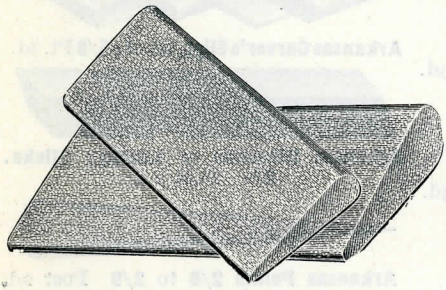


80 81 82 83 84 85 86 87 88 89 90 91

Carborundum Carver's Slips, $2\frac{1}{4} \times \frac{7}{8} \times \frac{3}{16}$ in.

80	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**	**90**	**91**
F	M	C	F	M	C	F	M	C	F	M	C

1/6 each Post 2d.



Carborundum Slip Stones.

$4\frac{1}{2} \times 2\frac{1}{8} \times \frac{5}{8}$-$\frac{5}{16}$

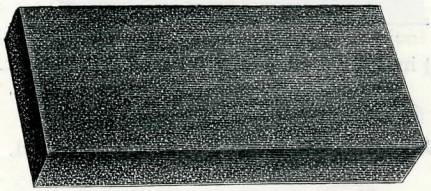
Fine	Medium	Coarse
No. 180	**No. 181**	**No. 182**

3/3 Post 4d.

$4\frac{1}{2} \times 1\frac{3}{4} \times \frac{1}{2}$-$\frac{3}{16}$ in.

Fine	Medium	Coarse
No. 183	**No. 184**	**No. 185**

2/3 Post 3d.



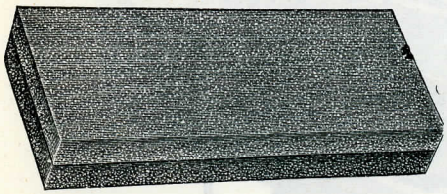
Carborundum Sharpening Stones.

Grades—F fine, M medium, C coarse.

8 × 2 × 1			8 × 2 × $\frac{3}{4}$			6 × 2 × 1 in.		
115	**116**	**117**	**118**	**119**	**120**	**121**	**122**	**123**
F	M	C	F	M	C	F	M	C
5/3			**4/9**			**4/-**		
Post 6d.			6d.			5d.		

6 × 2 × $\frac{5}{8}$		6 × $1\frac{1}{2}$ × $\frac{1}{2}$		7 × 2 × 1 in.		
124	**125**	**130**	**131**	**133**	**134**	**135**
F	M	F	M	F	M	C
3/3		**2/6**		**4/6**		
Post 6d.		6d.		6d.		

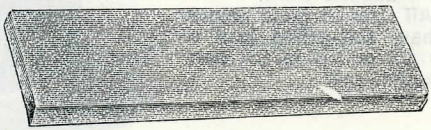
5 × 2 × $\frac{5}{8}$		4 × $1\frac{3}{4}$ × $\frac{1}{2}$			4 × 1 × $\frac{1}{4}$ in.		
136	**137**	**142**	**143**	**144**	**145**	**146**	**147**
F	M	F	M	C	F	M	C
2/9		**2/3**			**1/6**		
Post 6d.		4d.			3d.		



Carbo Combination Sharpening Stones.

One face coarse and one face very fine.

8 × 2 × 1	6 × 2 × 1	7 × 2 × 1	5 × 2 × $\frac{3}{4}$	4 × $1\frac{3}{4}$ × $\frac{5}{8}$
108	**109**	**110**	**111**	**112**
6/3	**4/6**	**5/3**	**3/6**	**3/-**
Post 6d.	6d.	6d.	6d.	4d.



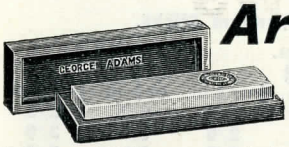
Carborundum Machinist's Special Stone.

No. 292 4 × 1 × $\frac{1}{2}$ in. Fine or medium **2/-** Post 2d.

Pocket Stone.

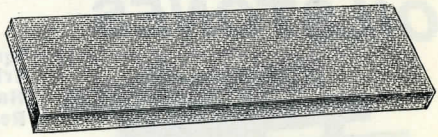
No. 149 3 × $\frac{7}{8}$ × $\frac{3}{8}$ in. **9d.** Post 2d.

Arkansas OILSTONES

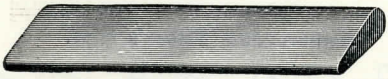


Arkansas Oilstones, mounted in polished boxes.

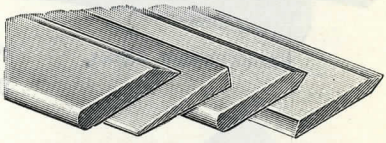
Size	3	4	5	6
	3/-	**3/9**	**4/9**	**5/9**
Post	4d.	5d.	6d.	6d.



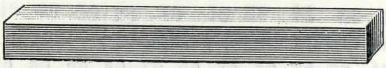
Arkansas Unmounted Oilstones.
3 to 6 in. long, from **1/6** upwards.
Arkansas Penknife Pieces.
4 to 5 in. long **2/-** to **3/-** each.



Arkansas Gouge Slips.
$3\frac{1}{2}$ to 4 in. **1/9** 4 to $4\frac{1}{2}$ in. **2/-** $4\frac{1}{2}$ to 5 in. **2/3** Pt. 3d.



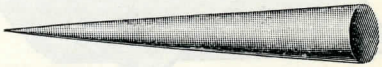
Arkansas Carver's Slips, set of 4 **5/3** Pt. 3d.



Arkansas Square Sticks.
$\frac{1}{4}$ in. **1/6** Pt. 2d. $\frac{3}{8}$ in. **1/8** Pt. 2d. $\frac{1}{2}$ in. **2/5** Pt. 3d.

Arkansas Diamond or **Lozenge Sticks.**
2/- Post 2d.

Arkansas Triangular Sticks.
$\frac{1}{4}$ in. **1/6** Pt. 2d. $\frac{3}{8}$ in. **1/8** Pt. 2d. $\frac{1}{2}$ in. **2/5** Pt. 3d.



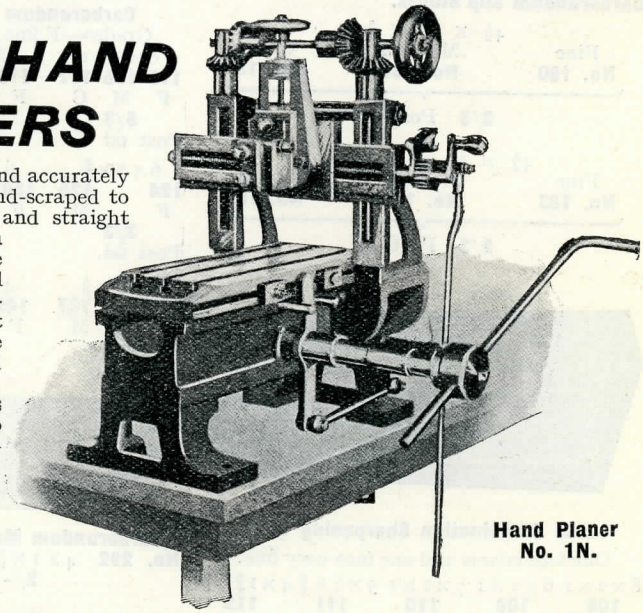
Arkansas Points 2/6 to **2/9** Post 2d.

Arkansas Flat Sticks 2/- to **3/-** Post 2d.

BENCH HAND PLANERS

These are well designed and accurately fitted. All slides are hand-scraped to standard surface plates and straight edges. The four main screws have square threads and gun-metal nuts. The T slots are accurately machined out from the solid. The swivel slides are graduated for angular work.

All sizes of these planers have self-acting feed to right or left in the horizontal cut.



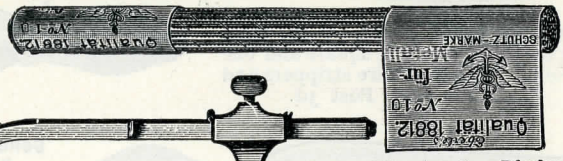
Hand Planer No. 1N.

No. 1N	Planes	14 in. long,	$8\frac{1}{2}$ in. wide,	6 in. deep.	Weight about 2 cwt.	..	**£20 0 0**
No. 3N	,,	22 in. ,,	10 in. ,,	10 in. ,,	,, ,, $4\frac{1}{2}$,,	..	**£34 0 0**
No. 4N	,,	24 in. ,,	12 in. ,,	10 in. ,,	,, ,, $5\frac{1}{2}$,,	..	**£48 0 0**

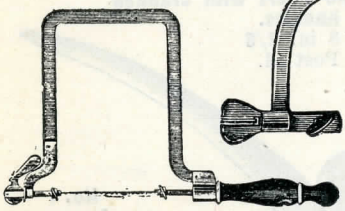
PIERCING SAWS

Flat Slitting Blades. $5\frac{1}{8}$ in. long.
$\frac{1}{8}$ in. deep **1/-** doz., $\frac{1}{4}$ in. deep **1/3** doz., $\frac{3}{8}$ in. deep **2/4** doz., $\frac{1}{2}$ in. deep **3/4** doz. Post 2d.

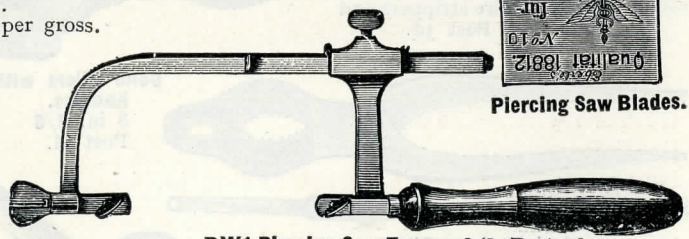
Piercing Saw Blades for Metal.
Nos. 0, 1, 2, 3, 4, 5 and 6.
Finest No. 0.
6d. per doz. **5/6** per gross.



Piercing Saw Blades.

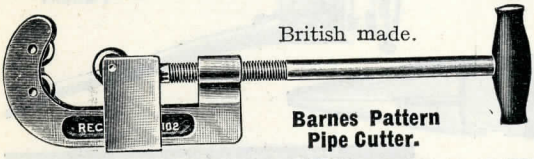


No. 49 Piercing Saw Frame 3/- Post 6d.



RW1 Piercing Saw Frame 2/6 Post 4d.

PIPE CUTTERS

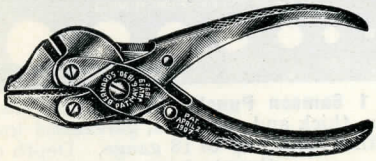


British made.

Barnes Pattern Pipe Cutter.

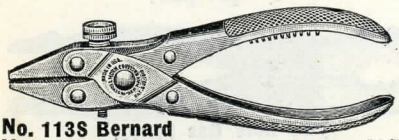
1 $\frac{1}{8}$ to 1 in. pipe **10/-** Post 9d.
Extra wheels **9d.** each.
2 $\frac{1}{2}$ to 2 in. pipe **13/6** Post 1/-
Extra wheels **10d.** each.
3 $1\frac{1}{2}$ to 3 in. pipe **22/6** Post 1/3
Extra wheels **1/2** each.

PLIERS



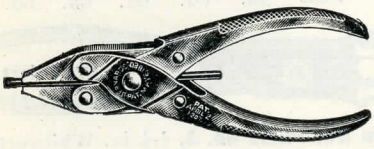
No. 102 Bernard Heavy Cutting Pliers.
$4\frac{1}{2}$ in. **7/-**; $5\frac{1}{2}$ in. **8/2**; $6\frac{1}{2}$ in. **10/6**
Post 4d.

No. 106 Bernard Snipe Nose Pliers.
106 5 in., 1 in. length of jaws **5/11** Post 5d.
206 6 in., 2 in. length of jaws **7/-** Post 5d.

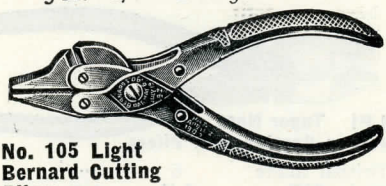


No. 113S Bernard Vice Pliers. Self opening, Spring Action.
$5\frac{1}{2}$ in. **8/2** Post 4d.; $6\frac{1}{2}$ in. **9/3** Post 6d.

No. 104 Bernard Light Round Nose Pliers
5 in. **5/11** Post 3d.

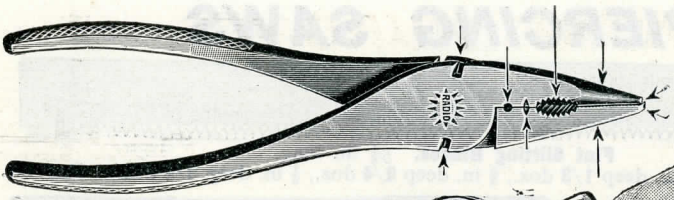


No. 100 Bernard Heavy Flat Nose Pliers.
$4\frac{1}{2}$ in. **4/8**; $5\frac{1}{2}$ in. **5/11**; $6\frac{1}{2}$ in. **7/-**; 8 in. **9/4**
Post 5d. 5d. 6d. 6d.
No. 103 Light Flat Nose, 5 in. **5/11** Post 3d.

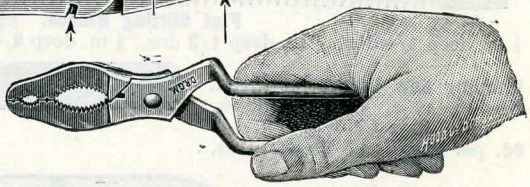


No. 105 Light Bernard Cutting Pliers.
105 5 in., 1 in. length of jaw **9/4** Post 3d.
205 5 in., 2 in. length of jaw **10/6** Post 4d.

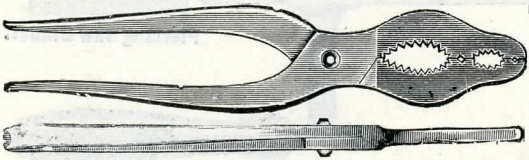
PLIERS



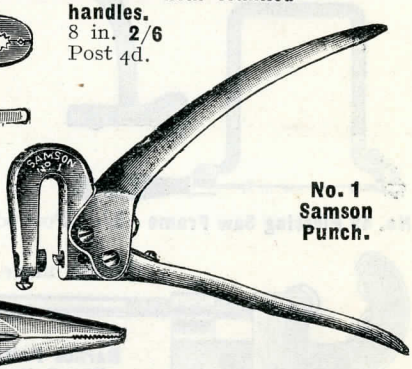
No. 47 Radio Pliers, 6 in. long, $\frac{1}{4}$ in. thick, one nose square and one round. 2 sizes of wire strippers and cutters **2/-** Post 3d.



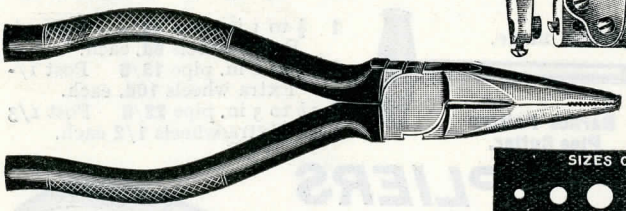
Cone Pliers with cranked handles.
8 in. **2/6**
Post 4d.



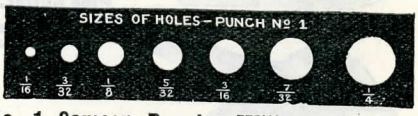
Straight Cone Pliers.
7 in. **1/9** Post 4d. 10 in. **3/-** Post 4d.



No. 1 Samson Punch.



No. 5459 Snipe Nose Cutting Pliers, with insulated handles for electrical and radio work, $5\frac{3}{4}$ in. long **2/3** Post 3d.



No. 1 Samson Punch. Will punch brass $\frac{3}{32}$ in. thick and soft steel, galvanised iron or other metals up to 18 gauge. Depth of throat $1\frac{3}{8}$ in.
With $\frac{1}{4}$ in. punch and die, **18/-** Post 6d.
Extra punches and dies $\frac{3}{32}$ to $\frac{1}{4}$ in. by $\frac{1}{32}$ in. **4/-** per pair.

LP2 Square Nose Heavy Combination Pliers. British made.

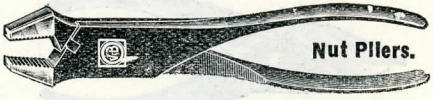
Plain **83S**	6in. **1/1**	7in. **1/7**	8in. **2/-**
Insul. handles	6in. **1/9**	7in. **2/4**	8in. **2/10**
Post	4d.	6d.	6d.

Two-hole Gas Pliers.

British made	6	7	8	9	10 in.
No. 86	**1/7**	**1/10**	**2/-**	**2/8**	**3/4**
Post	5d.	6d.	6d.	6d.	6d.

LP1 Taper Nose Heavy Combination Pliers.

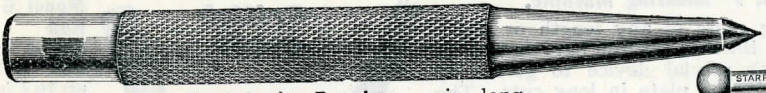
British made	6	7	8in.
Plain **83T**	**1/1**	**1/7**	**2/-**
Insulated handles	**1/9**	**2/4**	**2/10**
Post	4d.	6d.	6d.



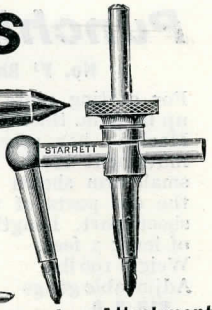
Nut Pliers.

Plain Nut Pliers No. 3, $\frac{1}{4}$-$\frac{1}{2}$ in. Whitworth, **1/2** Post 4d.
No. 5, $\frac{1}{2}$-1 in. Whitworth, **1/9** Post 5d.
Slip Joint Nut Pliers, 7 in. long, $\frac{3}{8}$-$1\frac{1}{4}$ in. Whitworth, with wire cutter and screwdriver end, **1/10** Post 5d.

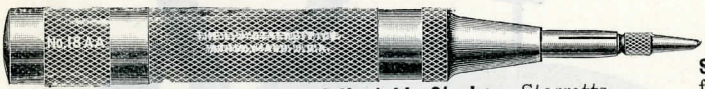
CENTRE PUNCHES



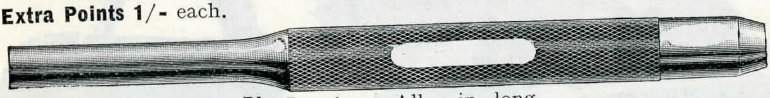
Cast Steel Centre Punches. 4 in. long.
A $\frac{1}{8}$ in. point, $\frac{5}{16}$ in. diam. **B** $\frac{5}{32}$ in. point, $\frac{3}{8}$ in. diam.
C $\frac{3}{16}$ in. point, $\frac{3}{8}$ in. diam. **D** $\frac{1}{4}$ in. point, $\frac{3}{8}$ in. diam.
6d. each. Post 2d.



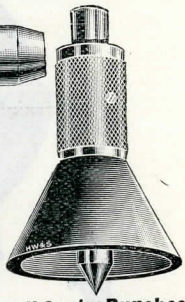
Spacing Attachment for automatic centre punches 18A & 18B **8/9** Post 2d.



Automatic Centre Punches, Adjustable Stroke. Starretts.
18AA $3\frac{3}{4} \times \frac{3}{8}$ in. **9/-** Post 2d. **18A** $5 \times \frac{1}{2}$ in. **13/-** Post 3d. **18B** $6 \times \frac{5}{8}$ in. **16/-** Post 3d.
Extra Points 1/- each.

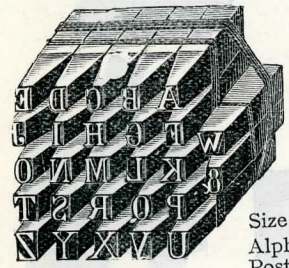


Pin Punches. All 4 in. long.
A $\frac{9}{32} \times \frac{3}{32}$ **7d.** Post 2d. **B** $\frac{9}{32} \times \frac{1}{8}$ **6d.** Post 2d. **C** $\frac{5}{16} \times \frac{3}{16}$ **6d.** Post 2d. **D** $\frac{3}{8} \times \frac{1}{4}$ **6d.** Post 2d.



Bell Centre Punches Cast iron.

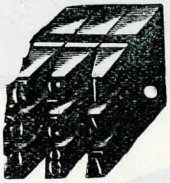
	1	$1\frac{1}{2}$	2 in.
	2/-	**2/6**	**3/6**
Pst.	3d.	3d.	5d.



Alphabet Set.

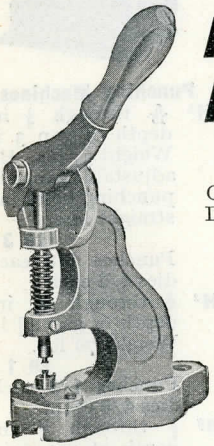
LETTER Punches

Alphabet and Figure Sets.
English make.



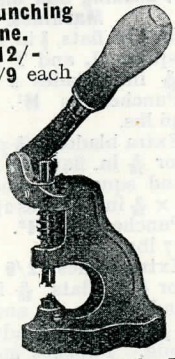
Size	$\frac{1}{32}$	$\frac{1}{16}$	$\frac{3}{32}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$ in.
Alphabets	**9/-**	**7/-**	**9/-**		**12/6**	**16/-**		**18/-**	**22/6**
Post	6d.	6d.	9d.		9d.	1/-		1/3	1/3
Figures	**3/-**	**2/6**	**3/-**		**4/3**	**5/6**		**6/-**	**7/6**
Post	4d.	4d.	5d.		6d.	9d.		9d.	9d.

PUNCHING MACHINES

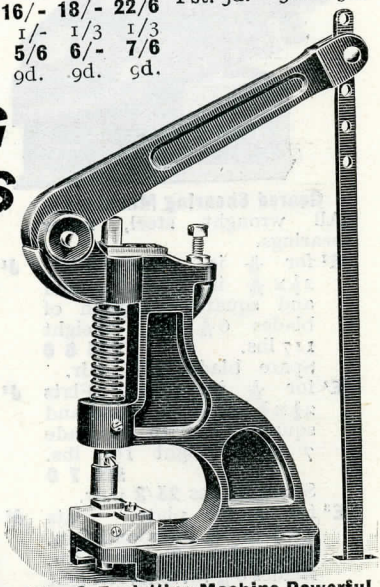


New General Punching and Eyeletting Machine
Gap 2 in. **23/3**
Dies from **4/6** each

Premier Punching Machine.
Gap $1\frac{7}{8}$ in. **12/-**
Dies from **3/9** each



Premier Punching and Eyeletting Machine.



Punching & Eyeletting Machine, Powerful.
4in. gap, for treadle **37/6** Diesfrom **4/6** ea.

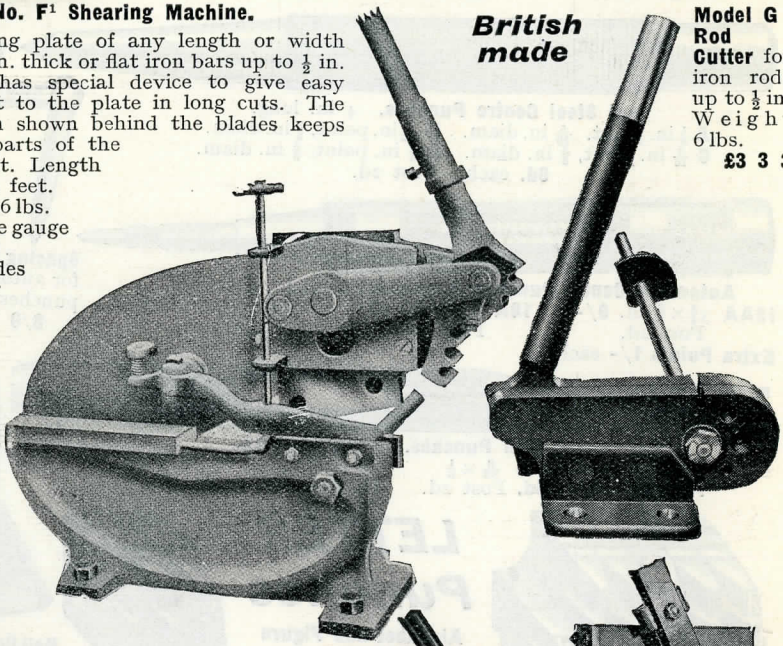
Punching & Shearing Machines

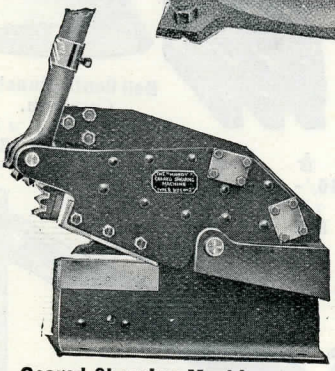
No. F¹ Shearing Machine.

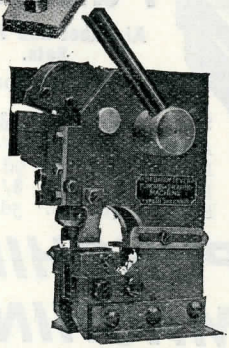
For cutting plate of any length or width up to $\frac{5}{16}$ in. thick or flat iron bars up to $\frac{1}{2}$ in. Machine has special device to give easy movement to the plate in long cuts. The small arm shown behind the blades keeps the cut parts of the sheet apart. Length of lever 3 feet. Weight 196 lbs. Adjustable gauge **£18 3 0**
Extra blades per pair **31/-**

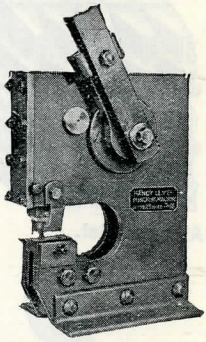
British made

Model G Rod Cutter for iron rods up to $\frac{1}{2}$ in. Weight 6 lbs. **£3 3 3**









Geared Shearing Machines.

All wrought steel, roller bearings.

E¹ for $\frac{3}{16}$ in. plate. Flats $2\frac{1}{8} \times \frac{5}{16}$ in., $\frac{1}{2}$-in. round and square. Length of blades $6\frac{5}{16}$ in. Weight 117 lbs. **£14 6 0**
Spare blades **23/3** pair.

E² for $\frac{5}{16}$ in. plate. Flats $2\frac{3}{4} \times \frac{3}{8}$ in., $\frac{9}{16}$ in. round and square. Length of blade 7 in. Weight 191 lbs. **£20 7 0**
Spare blades **25/3** pair.

E³ for $\frac{3}{8}$ in. plate. Flats $4 \times \frac{1}{2}$ in., $\frac{15}{16}$ in. round, $\frac{7}{8}$ in. square, L or T iron $\frac{5}{16}$ in. Blades $6\frac{5}{16}$ in. long. Weight 192 lbs. **£37 8 0**
Spare blades **28/9** pair.

Punching and Shearing Machines.

J¹ for $\frac{1}{4}$ in. flats, $\frac{3}{8}$ in. round and square, L and T iron $1\frac{1}{2} \times \frac{3}{16}$ in. Blades 2 in. long. Punches as **H¹**. Weight 36 lbs. **£7 3 0**
Extra blades **7/6** pair.

J² for $\frac{5}{16}$ in. flats, $\frac{7}{16}$ in. round and square, L and T iron $2 \times \frac{3}{16}$ in. Blades $2\frac{3}{8}$ in. long. Punches as **H²**. Weight 77 lbs. **£12 2 0**
Extra blades **12/9** pair.

J³ for $\frac{3}{8}$ in. flats, $\frac{9}{16}$ in. round and square, L and T iron $2\frac{3}{16} \times \frac{5}{16}$ in. Blades $2\frac{3}{4}$ in. long. Punches as **H³**. Weight 150 lbs. **£20 18 0**
Extra blades **16/6** pair.

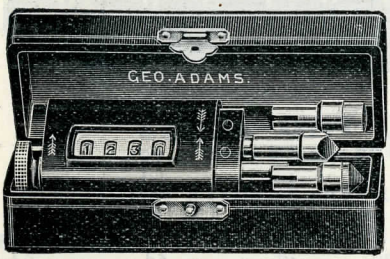
Punching Machines.

H¹ $\frac{5}{16}$ through $\frac{1}{4}$ in., depth of gap 3 in. Weight 37 lbs. Has adjustable gauge for punching holes in a straight line. **£6 3 9**
Punches **1/8** each, dies **4/6** each.

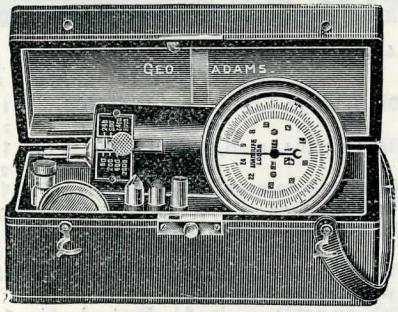
H² $\frac{3}{8}$ through $\frac{5}{16}$ in., depth of gap $4\frac{3}{4}$ in. Weight 70 lbs. **£9 1 6**
Punches **1/8** each, dies **4/6** each.

H³ $\frac{1}{2}$ through $\frac{3}{8}$ in., depth of gap 6 in. Weight 132 lbs. **£18 14 9**
Punches **2/9** each, dies **6/9** each.

REVOLUTION COUNTERS
OR SPEED INDICATORS



Record Direct Reading Speed Indicator.
Sets back to zero by turning knob at end. Black figures on brass dials. Right and left hand.
In velvet lined case **11/6** Post 4d.



Hand Tachometers.

These show at a glance and without the aid of a watch the revolution per minute of any shaft. The error shewn on the dial will not exceed 1% either way.

A registers speeds from 30 to 4,000 revolutions. The inner dial is marked 30 to 120 and the outer 100 to 400. The scale at top shows 4 readings or rates of speed, the first 30 to 120 and the third 300 to 1,200 are indicated on the inner dial. The second 100 to 400 and the fourth 1,000 to 4,000 are indicated on the outer. Thus if the needle makes more than one revolution the slider is shifted one step lower down the scale until the needle comes to rest and points to a speed which can be read off the inside or outside dial.

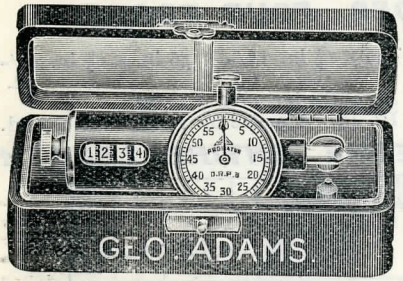
Complete in case with 4 centres, surface speed indicator and bottle of oil.

A £6 11 3 Post 9d.

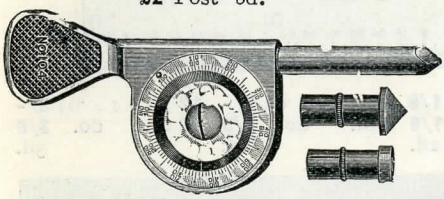
B is identical with **A** except that it indicates speeds between 60 and 8,000 revs. per minute. The inside dial is marked 60 to 240 and the outside 200 to 800. The first and third speeds on the slider scale read on the inside dial and the second and fourth on the outside.

Complete in case with 4 centres, surface speed indicator and bottle of oil.

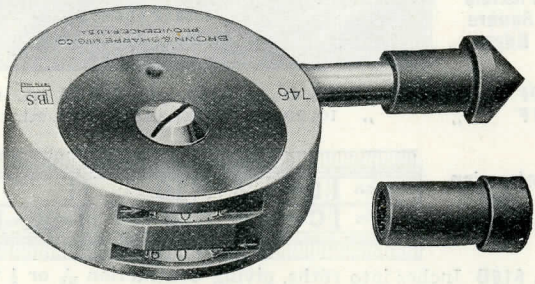
B £6 15 11 Post 9d.



Probator Revolution Counter is a combination of stop watch and 4 figure counter. The watch goes for 1 minute, it is rewound and reset to starting point by pressing on the knob above it. The counter is set back to zero by turning the milled knob to left. With cap supplied, this may be used as stop watch only. In velvet lined case **£2** Post 6d.

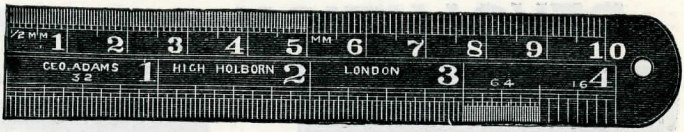


No. 104 Speed Indicator.
Dial read both ways, nickel-plated.
6/6 Post 3d.
Case extra **5/3**



No. 746 Speed Indicator with 2 rubber points.
7/9 Post 3d.

STEEL RULES



ALL BRITISH MADE

MARKED ONE SIDE, TWO EDGES

300D 8, 16, 32, 64in. .. 4in. **10d.** 6in. **1/-** 12in. **1/10** 24in. **5/6** 36×1½ in. **19/-**
Post 2d. 2d. 3d. 4d. 6d.

310D 16,32,64,10,20,50,100in. 4in. **1/1** 6in. **1/3** 12in. **2/-** 24in. **7/-** 36×1½in. **20/6**
Post 2d. 2d. 3d. 4d. 6d.

378D 16,32,64,c/m,m/m,½m/m. 4in. **1/-** 6in. **1/3** 12in. **2/3** 24in. **7/-** 1m. 1⅛in. **14/-** 1m. 1½in. **20/6**
See illustration. Post 2d. 2d. 3d. 4d. 6d. 6d.

382D 10,20,50,100in. c/m,m/m,½m/m 4in. **1/3** 6in. **1/6** 12in. **2/6**
Post 2d. 3d. 3d.

321D 16, 32, 64in. Tapping and Spanner sizes 4in. **1/1** 6in. **1/3** 12in. **2/-**
Narrow Rules ½ in. wide. Post 2d. 2d. 3d.

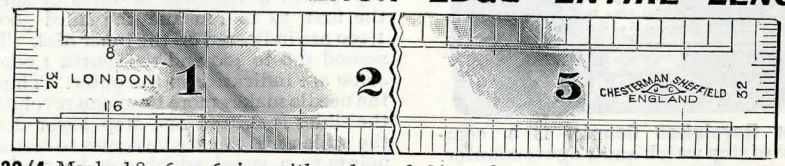
378D² as 378D. 4 in. **1/-** Post 2d. 6in. **1/3** Post 2d. 12in. **2/3** Post 3d.

MARKED ON BOTH SIDES, FOUR EDGES

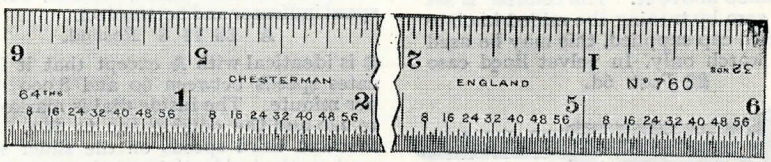
328D marked 8, 16, 32 & 64ths in.
6 in. **1/6** 12 in. **2/3** 24 in. **9/-** 36 × 1⅛ in. **14/-** 36 in. × 1½ in. **25/-**
Post 2d. 3d. 4d. 6d. 6d.

412D Marked 16, 32, 64, 10, 20, 50, 100, 12, 24, 48, 96ths in., c/m & m/m.
6 in. **1/9** Pt. 2d. 12 in. **3/-** Pt. 3d. 24 in. **13/-** Pt. 4d. 1 metre by 1½ in. **37/6** Pt. 6d.

ONE MARKING ON EACH EDGE ENTIRE LENGTH



No. 332/4 Marked 8,16,32,64 in., with ends grad. **4** in. × ¾ × ·03 **6** in. × ¾ × ·03 **12** in. × 1⅛ × ·04
1/7 Post 2d. **2/3** Post 2d. **3/10** Post 3d.

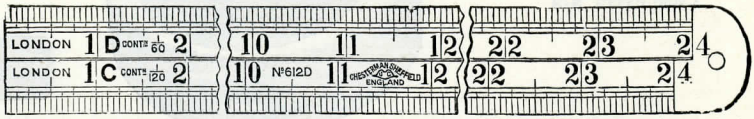


No. 760 Marked 8,16,32,64 in. **4** in. × ¾ × ·03 **1/6** **6** in. × ¾ × ·03 **2/-** **12** in. × 1 × ·04 **3/-**
No. 761 Do. 10,20,50,100 in. **4** in. do. **1/9** **6** in. do. **2/3** **12** in. do. **3/9**
Post 2d. 2d. 3d.

Flexible Square Edges.

760F ½ in. wide, marked 8, 16, 32, 64 in. 4 in. **1/6** Pt. 2d. 6 in. **2/-** Pt. 2d. 12 in. **3/-** Pt. 3d.
761F ,, ,, 10, 20, 50, 100 in. 4 in. **1/9** Pt. 2d. 6 in. **2/3** Pt. 2d. 12 in. **3/9** Pt. 3d.

Contraction or Shrink Rule.



No. 618D Inches into 16ths, giving contraction $\frac{1}{96}$ or ⅛ to the foot cast metal, $\frac{1}{64}$ or $\frac{3}{16}$ to the foot, brass. $\frac{1}{120}$ or $\frac{1}{10}$ to the foot, steel or iron. Also one edge standard.
24 in. **9/6** Post 4d.

Steel Rules & Straight Edges. British made.

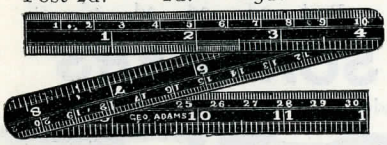
No. 378DR Rustless Rule.
Marked 16, 32, 64 in., m/m and ½ m/m.
4 in. **1/3** 6 in. **1/7** 12 in. **2/9**
Post 2d. 2d. 3d.

Engineer's Bevelled Straight Edges, Plain.

Length	12	18	24	36	48 in.
Width	1¾	1¾	1¾	2½	3 in.
Thickness	3/16	3/16	3/16	¼	5/16 in.
No. 89	**10/-**	**13/8**	**19/5**	**32/6**	**£2 12 6**
Post	6d.	6d.	9d.	1/-	rail

Mount Cutter's Straight Edges, ⅛ in thick, bevel 40°.

	12 × 1¼	18 × 1¼	24 × 1¼	36 × 1¾	48 × 2 in.
No. 90	**3/2**	**3/8**	**4/9**	**10/6**	**15/9**
Post	5d.	6d.	6d.	9d.	rail



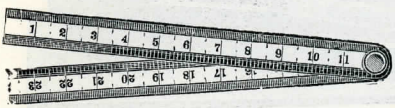
Folding Steel Rules.

½ in. wide, 4 in. joints, 3 folds per foot.
Marked 16, 32, 64 in., m/m and ½ m/m.

No. 891	1 ft.	2 ft.	1 metre
	1/10	**3/6**	**4/6**
Post	2d.	2d.	3d.

Rustless.
No. 891R 1 ft. **2/6**; 2 ft. **5/-** Post 2d.
Cases for Folding Rules.
1 ft. **4d.**, 2 ft. **6d.** Post 2d.

Coiled Ribbon Rules 5/6 Post 3d.
In these the rule is pulled straight out of its case as far as wanted and it remains rigid at this length. It is returned into its case by gentle pressure on the push button.
6 ft. long.
No. 350 ⅛ in. **No. 353** 16ths in.
No. 352 16ths and m/m.



Two foot Two fold Rules.
No. 2010S Brass Rule ¾ in. wide, 8, 16 in. **1/7** Post 3d.

Coiled Ribbon Rules Ejecting.

No. 360.

No. 52.
6 ft. × ⅝ in., marked ⅛ in., in Bakelite case with cover shield **6/-** Post 3d.

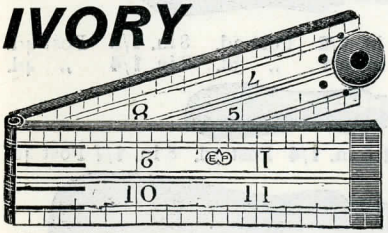
No. 360, mkd. ⅛, 6 and 8 ft.
No. 363 mkd. 1/16 6 and 8 ft.
No. 365, ,, 1/16 and m/m, 6 ft. only.
6 ft. long **3/6**; 8 ft. **4/-** Post 3d.

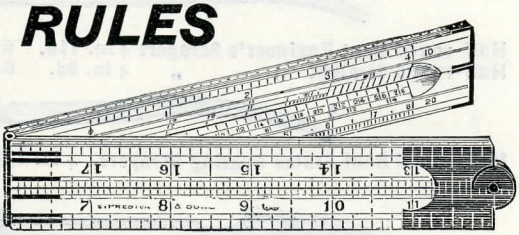
No. 290 Steel, ¾ in. wide, marked 16ths and 8ths. **1/11** Post 3d.

2/-
Post 3d.

3536 Thin Steel Mechanic's and Architect's Scales, Armstrong Pattern Flat, 1 ft. long.

IVORY RULES





1 Foot 4 fold
No. 1265, ½ in. wide, 8, 16ths **5/7** Post 3d.
No. 1268, ⅝ in. wide, 8, 16ths **10/6** Post 3d.
No. 1270 ¾ in. wide, 8, 16, 10, 12 and scales **16/-** Post 3d.
Marked ins. and m/m at a small extra charge.

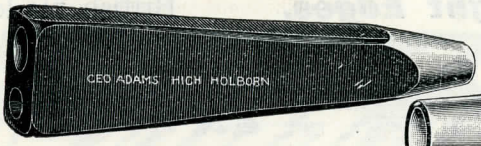
2 Foot 4 fold, 8, 16, 10, 12 and scales.
No. 1280, ¾ in. wide, **30/-** Post 4d.

No. 1282, 1 in. wide, **39/-** Post 4d.

No. 1284, 1⅛ in. wide, **45/-** Post 4d.

RIVET SETS

British made.



Double Rivet Sets.

	1/16 in.	3/32 in.	1/8 in.	3/16 in.	1/4 in.
	1/8	**1/10**	**2/2**	**3/2**	**3/7**
Post	3d.	3d.	3d.	4d.	5d.

Single Rivet Sets.

	1/16 in.	3/32 in.	1/8 in.	3/16 in.	1/4 in.
	10d.	**10d.**	**11d.**	**1/-**	**1/2**
Post	3d.	3d.	3d.	4d.	5d.

ENGINEER'S SCRAPERS

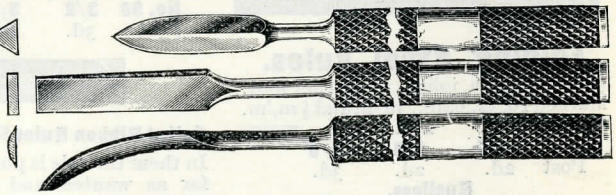
All British made.

Toolmaker's Scrapers with milled metal Handles.

6 in. long.

Triangular, Flat and half-round bent—same price each.

Each **2/3** Post 3d.

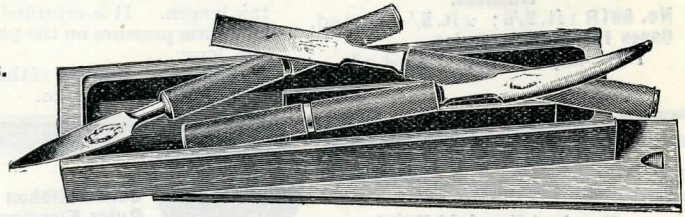


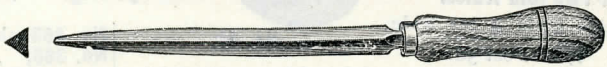
Set of Three 6-inch Toolmaker's Scrapers.

Complete in wooden case.

Per set **6/-**

Post 6d.

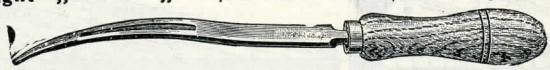




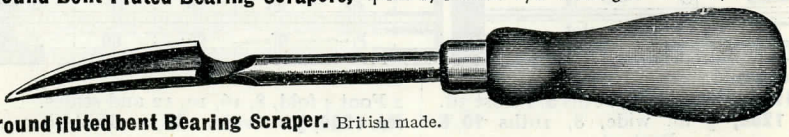
Triangular Engineer's Scrapers, 4 in. **10½d.** 6 in. **1/2** Post 3d. 8 in. **1/4** Post 4d.

Flat Engineer's Scrapers, 4 in. **9d.** 6 in. **1/1** Post 3d. 8 in. **1/3** Post 4d.

Half-round Bent Engineer's Scrapers 4 in. **11d.** 6 in. **1/2** Post 3d. 8 in. **1/5** Post 4d.
Half-round Straight „ „ 4 in. **9d.** 6 in. **1/1** „ 3d. 8 in. **1/4** „ 4d.



Half-round Bent Fluted Bearing Scrapers, 4 in. **1/1** 6 in. **1/4** Post 3d. 8 in. **1/7** Post 4d.

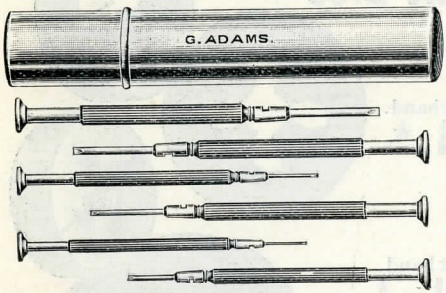


Half-round fluted bent Bearing Scraper. British made.

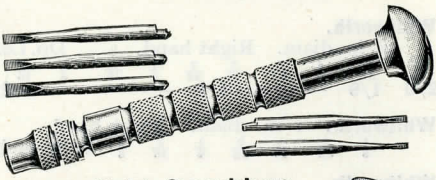
No. 258 4 in. Blade, **10d.** Post 3d.; 6 in. Blade, **1/3** Post 3d.; 8 in. Blade, **1/9** Post 4d.

SCREWDRIVERS

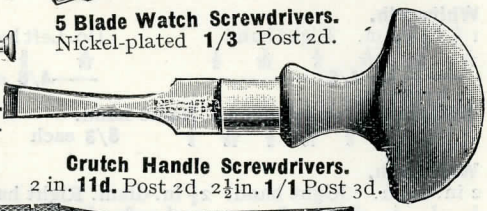
No. 579 Right-angular Screwdriver.
Octagon body, 8 in. long. Blade ⅜ in.
3/2 Post 3d.



Set of 6 Single Blade Watch Screwdrivers.
.08 in. to .022 in., in nickel tube **2/6** Post 3d.



5 Blade Watch Screwdrivers.
Nickel-plated **1/3** Post 2d.



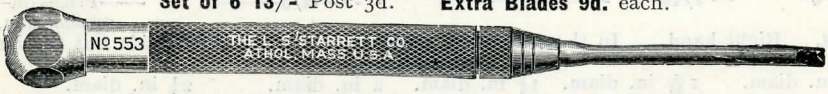
Crutch Handle Screwdrivers.
2 in. **11d.** Post 2d. 2½ in. **1/1** Post 3d.

No. 552 Optician's Screwdriver with Screwholder.
A complete **3/9** **B** without screwholder **2/9** **C** screwholder only **1/-** **D** blades only **9d.** Pt. 2d.

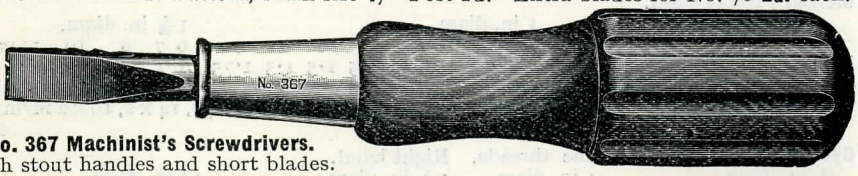
Single Blade Watch Screwdrivers.

No. 2 .08 in., **No. 3** .072 in., **No. 4** .06 in., **No. 5** .05 in., **No. 6** .04 in., **No. 7** .034 in. **4d.** each. Post 2d.

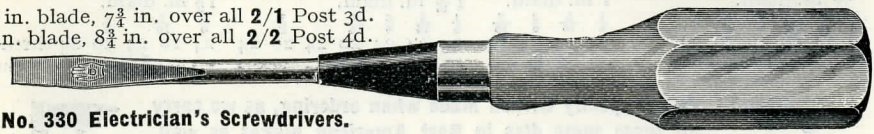
No. 555 Single Blade Watch Screwdrivers.
AA .025 in., **A** .04 in., **B** .055 in., **C** .07 in., **D** .08 in., **E** .1 in. **2/3** each. Post 2d.
Set of 6 13/- Post 3d. **Extra Blades 9d.** each.



No. 553 Pocket Screwdriver, Blade reverses into Holder.
A, handle ¼ in., blade 1⅞ in. long **1/9** Post 2d. **B,** handle ⅜ in., blade 3 in. long **2/3** Post 3d.
Extra blades **9d.**
No. 76 British made Pattern, small size **1/-** Post 2d. Extra blades for No. 76 **2d.** each.



No. 367 Machinist's Screwdrivers.
With stout handles and short blades.
1¾ in. blade, 7¾ in. over all **2/1** Post 3d.
3 in. blade, 8¾ in. over all **2/2** Post 4d.

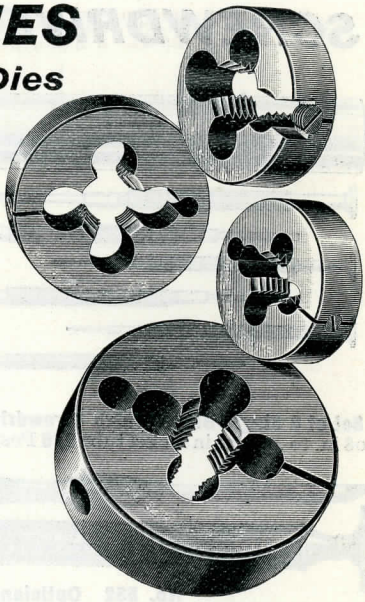


No. 330 Electrician's Screwdrivers.
With insulated handles, 4 in. **3/6** Post 3d. 6 in. **4/2** Post 4d. 8 in. **4/10** Post 5d.

SCREWING DIES

Circular adjustable split Dies

ALL BRITISH MADE



Whitworth.
13/16 in. diam. Right hand. Do. Left hand.
1/16 3/32 1/8 5/32 3/16 7/32 1/4 5/16 1/8 3/16 1/4 5/16
2/0 1/9 —— 1/4 —— —— 2/6 each

Whitworth. 1 in. diam. Right hand.
1/8 5/32 3/16 7/32 1/4 5/16 3/8 **1/10** each

Whitworth.
1 5/16 in. diam. Right hand. Do. Left hand.
3/16 1/4 5/16 3/8 7/16 1/2 5/16 3/8 1/2
—— 4/6 —— **—— 4/6** each

Whitworth. 1 1/2 in. diam. Right hand.
1/4 5/16 3/8 7/16 1/2 9/16 5/8 **5/3** each

Whitworth.
2 in. diam. Right hand. 2 1/4 in. diam. Right hand.
3/8 7/16 1/2 9/16 5/8 3/4 1/2 9/16 5/8 3/4 7/8 1 in.
—— Prices on —— —— Prices on ——
application. application.

B.S.F. British Standard, fine thread. Right hand.
13/16 diam. 1 in. diam. 1 5/16 in. diam. 1 1/2 in. diam. 2 1/4 in. diam.
1/4 5/16 1/4 5/16 3/8 7/16 1/2 1/4 5/16 3/8 7/16 1/2 1/4 5/16 3/8 7/16 1/2 5/8 1/2 5/8 3/4 7/8 1 in.
1/4 **—— 1/10 ——** **—— 4/6 ——** —— Prices on —— —— Prices on ——
application. application.

B.A. British Association 13/16 in. diam. Right. Do. Left hand. 1 in. diam. Right hand.
0 1 2 3 4 5 6 7 8 9 & 10 11 & 12 0 2 4 0 1 2 3 4 5 6 7 8
—— 1/4 —— **2/-** **3/-** **—— 1/6 ——** **—— 1/10 ——** each

Brass Tubing. Right hand. All 26 threads per inch.
13/16 in. diam. 1 in. diam. 1 5/16 in. diam. 1 1/2 in. diam. 2 1/4 in. diam.
1/4 5/16 1/4 5/16 3/8 1/4 5/16 3/8 7/16 1/2 1/4 5/16 3/8 7/16 1/2 1/2 5/8 3/4 7/8 1 in.
1/4 **— 1/10 —** **—— 4/6 ——** **—— 5/3 ——** —— Prices on ——
application.

Gas. Right hand. In these sizes the dimensions are not the outside but the inside of the pipe.
1 in. diam. 1 5/16 in. diam. 1 1/2 in. diam. 2 in. diam. 2 1/4 in. diam.
1/8 1/4 1/8 1/4 3/8 1/8 1/4 3/8 1/8 1/4 3/8 1/2 3/8 1/2 3/4 1 in. gas pipe
— 1/10 — **—— 4/6 ——** **—— 5/3 ——** — Prices on — —— Prices on ——
application. application.

Metric. Right hand.
13/16 in. diam. 1 in. diam. 1 5/16 in. diam.
3 4 5 6 7 4 5 6 7 8 10 12 6 7 8 10 12 m/m
by ·5 ·55 ·7 ·75 ·75 ·85 1 1 ·75 ·75 1 1 1 1·25 1·5 1·5 1·75 1 1 1·25 1·5 1·75 ,,
—— 1/4 —— **—— 2/6 ——** **—— 4/6 ——** each

Metric. Right hand. 1 1/2 in. diam. 7 × 1, 8 × 1·25, 10 × 1·5, 12 × 1·75, 14 × 2, 16 × 2 m/m **5/3** each

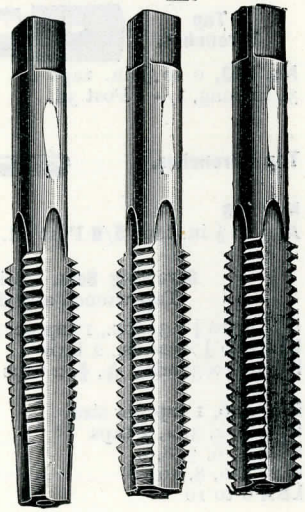
Cycle or Model Makers. Fine threads. Right hand.
13/16 in. diam. 1 in. diam. 1 5/16 in. diam. 1 1/2 in. diam.
5/32 3/16 3/32 1/4 5/16 1/4 5/16 3/8 7/16 1/4 5/16 3/8 7/16 1/2 3/8 7/16 1/2
40 40 40 40 30 32 24 24 24 24 24 24 24 20 24 20 24 24 20 24 20 24 threads
—— 1/6 —— **—— 2/6 ——** **—— 4/6 ——** **—— 5/3 ——** each

Please specify British Made when ordering, as we carry all these same dies in Best American makes as well.

SCREWING TAPS

ALL BRITISH MADE.

Taper Tap — Plug Tap — Bottoming Tap



Whitworth Right hand plug, taper or bottoming.

Size	1/16	3/32	1/8	5/32	3/16	7/32 in.
Threads	60	48	40	32	24	24
Each	1/-	10d.	8d.	8d.	8d.	9d.

Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1 in.
Threads	20	18	16	14	12	12	11	10	9	8
Each	9d.	1/-	1/1	1/2	1/3	1/9	2/0	2/9	3/6	4/-

Whitworth Left hand plug, taper or bottoming.

1/8, 9d. 3/16, 9d. 1/4, 1/- 5/16, 1/4 3/8, 1/6, 1/2 in., 2/1

BA Right hand plug, taper or bottoming. | **Left hand.**

0 to 8	9	10	11	12	14	16 BA	2	4 BA
9d.	1/2	1/2	1/9	1/9	1/10	1/10	1/-	1/-

BSF Right hand plug, taper or bottoming.

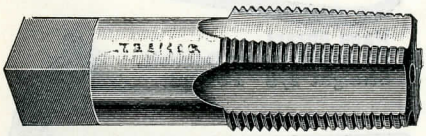
Size	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1 in.
Threads	32	26	22	20	18	16	16	14	12	11	10
Ea.	8d.	9d.	1/-	1/1	1/2	1/3	1/9	2/-	2/9	3/6	4/-

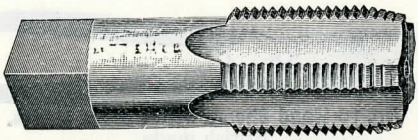
Metric Right hand plug, taper or bottoming.

Size	3		4		5		6	7	8		10	12		14	16	Sparkg. Plug 18
Pitch	·5	·55	·7	·75	·75	·85	1	1	1	1·25	1·5	1·5	1·75	2	2	1·5
Each	9d.	9d.	9d.	9d.	10d.	10d.	11d.	1/3	1/5	1/5	1/8	2/2	2/2	2/5	2/9	3/6

Cycle or **Model Makers,** Right hand plug, taper or bottoming.

5/32	3/16	7/32	1/4		5/16			3/8		7/16		1/2		9/16
40	40	40	24	40	24	30	32	24	32	20	24	20	24	18
1/-	1/-	1/-	1/-	1/-	1/3	1/3	1/3	1/3	1/3	1/6	1/6	2/-	2/-	2/9





Gas Right hand taper or straight.

1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2 in.
28	19	19	14	14	11	11	11	11
1/6	1/8	2/2	2/9	3/9	5/6	7/3	9/6	17/-

Brass Tubing Right taper or plug.

1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1 in.
All 26 threads per inch								
9d.	1/-	1/1	1/2	1/3	2/-	2/9	3/6	4/-

Please Specify British Made when ordering as we carry all these same taps in best American make.

DIE STOCKS

British made.

For circular dies $\frac{13}{16}$ in. **1/6** 1 in. **3/-** $1\frac{1}{2}$ in. **7/6**

Tap Wrenches.

British made.

No. 103, 0 to $\frac{1}{4}$ in. taps $3\frac{1}{2}$ in. long, **1/-** Post 3d.

No. 111, 0 to $\frac{3}{8}$ in. taps $4\frac{3}{4}$ in. long, **1/6** Post 4d.

No. 105, $\frac{3}{16}$ to $\frac{1}{2}$ in. taps $8\frac{1}{4}$ in. long, **4/6** Post 5d.

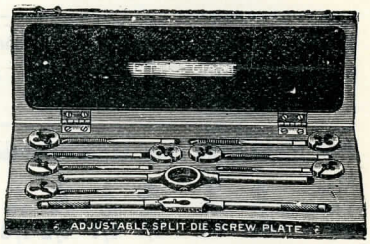
Tap Wrenches.

British made.

No. 106
A, $\frac{1}{4}$ to $\frac{1}{2}$ in. taps **5/9** Post 5d. **B,** $\frac{1}{4}$ to $\frac{3}{4}$ in. taps **13/6** Post 9d. **C,** $\frac{1}{2}$ to 1 in. taps **19/6** Post 1/3

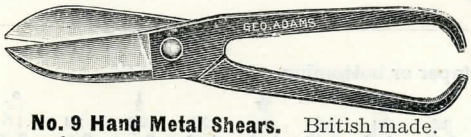
Screwing Sets. British made.
Tap wrench and die stock.

HW $\frac{1}{16}$ to $\frac{1}{4}$ × 32nds., 1 tap per size,	**Whitworth**	**22/6**
LW $\frac{1}{8}$ to $\frac{1}{4}$ × 32nds., 2 taps	do.	**21/-**
P $\frac{1}{8}$ to $\frac{1}{4}$ × 32nds., $\frac{5}{16}$, $\frac{3}{8}$, 2 taps	do.	**28/6**
	BA.	
D 2, 4, 6, 1 tap per size	do.	**12/-**
G, 0, 1, 2, 3, 4, 2 taps	do.	**20/-**
HBA 5, 6, 7, 8, 9	do.	**22/-**
K 2, 4, 6, 8, 10	do.	**22/-**
LBA 0 to 10	do.	**45/6**



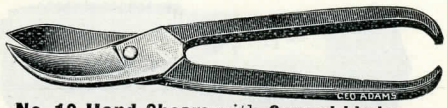
SHEARS and SNIPS

FOR SHEET METAL

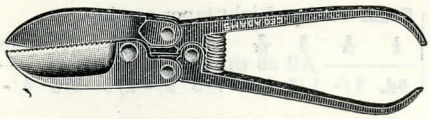


No. 9 Hand Metal Shears. British made.

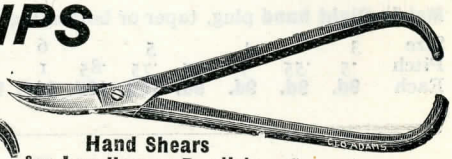
6	7	8	9	10	12	14 in.
1/7	**1/11**	**2/2**	**2/6**	**2/10**	**4/1**	**5/7**
Post 3d.	4d.	5d.	6d.	6d.	6d.	9d.



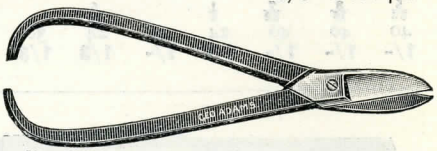
No. 10 Hand Shears with **Curved blades.**
British made.
8 in. **3/-** 10 in. **4/-** 12 in. **5/3** Post 6d.



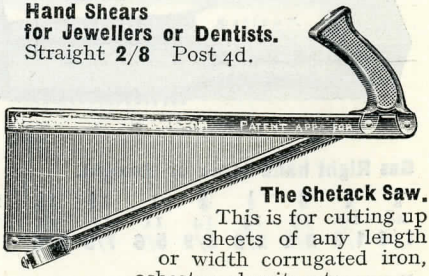
No. 7 Hand Shears with **Compound leverage.**
British made.
8 in. **6/-** 10 in. **7/-** 12 in. **9/-**
Post 6d. 6d. 9d.



Hand Shears for Jewellers or Dentists. Curved.
3/3 Post 4d.



Hand Shears for Jewellers or Dentists.
Straight **2/8** Post 4d.

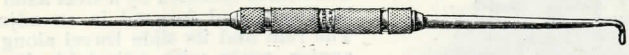


The Shetack Saw.
This is for cutting up sheets of any length or width corrugated iron, asbestos, ebonite, etc.

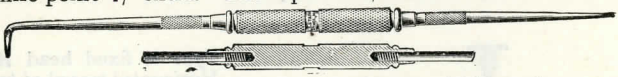
12 in. with $3\frac{3}{4}$ in. depth of cut **7/6** Post 9d.
Extra blades per doz. **3/11** ,, 4d.
16 in. with $7\frac{1}{4}$ in. depth of cut **12/6** ,, 9d.
Extra blades per doz. **10/10** ,, 4d.

SCRIBERS, SCRIBING BLOCKS

No. 70 Pocket Scriber. Point reverses into holder for carrying in pocket.
No. 70A Small size **1/6** Post 2d. **No. 70B** Large size **2/3** Post 2d.
Extra points, either size **9d.** each.
British Made Pattern small size **1/-** Post 2d. Points for this 2d. each.

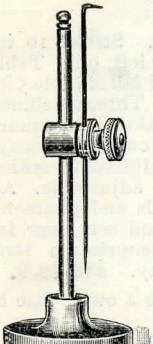


No. 68 Adjustable Sleeve Scriber. The body has a hole clear through with a thimble chuck at each end; the points can thus be shortened or lengthened as required.
No. 68 8 or 12 in. long, no knife point **2/9** Post 2d.
Knife point **1/-** extra. Extra points **1/-** each.



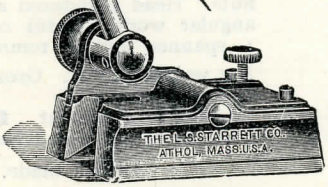
No. 77 Double-ended Scriber, British made.
7 in. long **1/-** Post 2d.

No. 72 Scriber, 4½ in. long, British made **6d.** Post 2d.

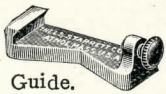


British made.

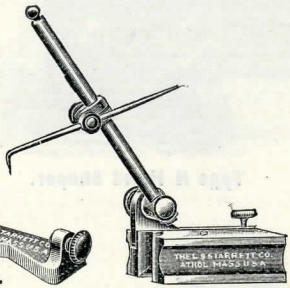
Scribing Block, No. 404
6 in. .. **3/9** Post 6d.
9 in. .. **5/6** Post 9d.



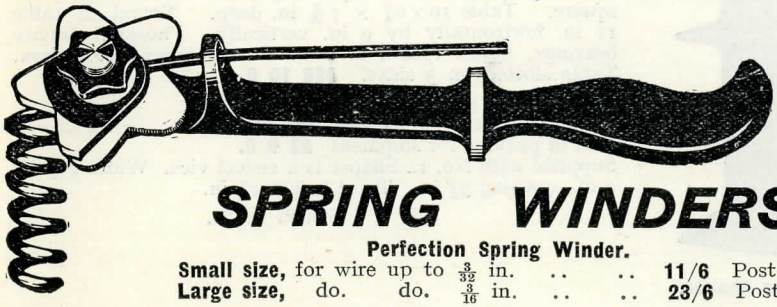
No. 57 Scribing Block.
A, 3 in. soft base, 9 in. Spindle **17/9** Post 9d.
B, 3 in. soft base, 2 Spindles.
9 in. and 12 in. **20/6** Post 9d.



Guide.



No. 56 Toolmaker's Scribing Block.
56A 4 in. spindle, with guide **24/9** Post 6d.
56B 4 in. spindle, no guide **21/3** Post 6d.
Extra 7 in. spindle **1/9**

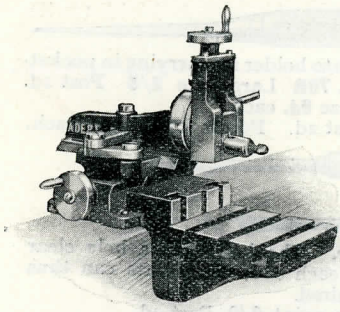


SPRING WINDERS

Perfection Spring Winder.

Small size,	for wire up to	$\frac{3}{32}$ in.	.. ..	**11/6**	Post 3d.
Large size,	do. do.	$\frac{3}{16}$ in.	.. ..	**23/6**	Post 6d.

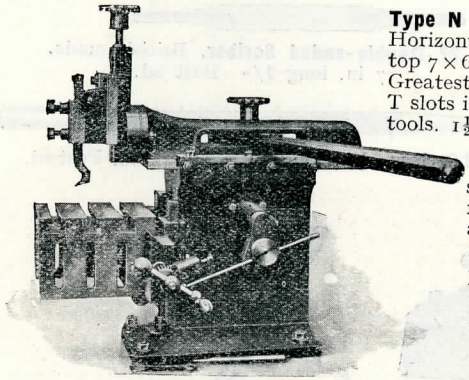
SHAPING MACHINES



Model Maker's Small Hand Shaper.

Adept small travelling head **Hand Shaper** for model makers. Stroke $3\frac{1}{2}$ in. 3 in. cross travel of slide. Size of table $4\frac{1}{2} \times 4$ in. 2 in. rise and fall of table. Vertical feed of tool slide $1\frac{3}{4}$ in. Maximum distance tool to table 3 in. Weight 18 lbs. Slide has clapper and tool post for $\frac{5}{16}$ in. square tools. The ram is operated by a steel hand lever, it travels backward and forward in an adjustable V slide. The ram and its slide travel along a bed at right angles, again with adjustable V slides. This is operated by handwheel, screw and nut. The front table is removable so that work may be bolted to the slotted face of the apron. **£2 17 6.**
Packing for shipment **5/-** extra.

British made.

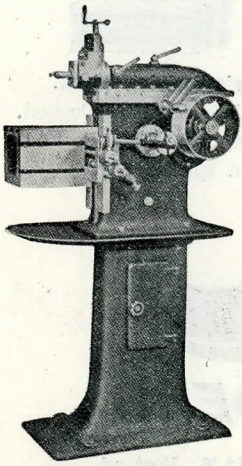


Type N Hand Shaper.

Type N fixed head **Hand Shaper.** Stroke 10 in. Horizontal travel of table, right or left, 9 in. Table top 7×6 in. by 5 in. deep. Rise and fall of table 5 in. Greatest distance tool to table 5 in. Three machined T slots in table for $\frac{1}{2}$ in. bolts. Takes $\frac{1}{2}$ in. square tools. $1\frac{1}{2}$ in. hole through body for cutting keyways in shafts. Handle has 9 different working positions. Self act feed adjustable. All screws have square threads and gunmetal nuts. Head is indexed and sets over for angular work. Outfit comprises 1 tool, 1 spanner and 1 tommy. **£16 10 0.**

Net weight $1\frac{1}{2}$ cwt. Gross 2 cwt. Size of case $25 \times 22 \times 21$ in.
Packing for shipment **£1.**
Swivel vice 3 in. wide takes to 7 in. long. **£3.**

British made.



No. 1a Power Shaper.

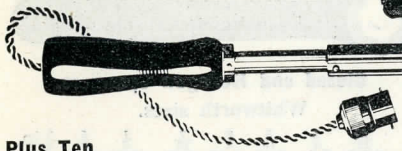
No. 1a. Fixed head **Power Shaper,** 10 in. adjustable stroke, fast and loose pulleys, $7\frac{7}{8} \times 1\frac{3}{4}$ in. face, through 2-speed gear box. Self acting horizontal and vertical adjustable feed to table. Revs. of driving pulley 200 p.m. Strokes of ram 28 and 50 p.m. Power required $\frac{1}{2}$ H.P. Size of tools $\frac{1}{2}$ in. square. Table $10 \times 6\frac{3}{4} \times 7\frac{5}{16}$ in. deep. Travel of table 11 in. horizontally by 9 in. vertically. Phosphor bronze bearings. Quick return of ram. Swivel indexed tool box. Table slotted on 3 sides. **£28 10 0.**

Net weight 530 lbs. Gross 662 lbs.
Case $55 \times 23 \times 32$ in. Cubic feet 23.
Cost of packing for shipment **£2 0 0.**
Supplied with No. 1a Shaper is a swivel vice. Width of jaws 4 in., opening $5\frac{1}{2}$ in. Total height $4\frac{1}{2}$ in.

British made.

SOLDERING IRONS

1006 Electric Soldering Iron, 13in. long, for 200/220 or 230/250 volts. 6 ft. of silk-covered flex and B/C adapter. Weight 1 lb. **10/6** Post 6d.

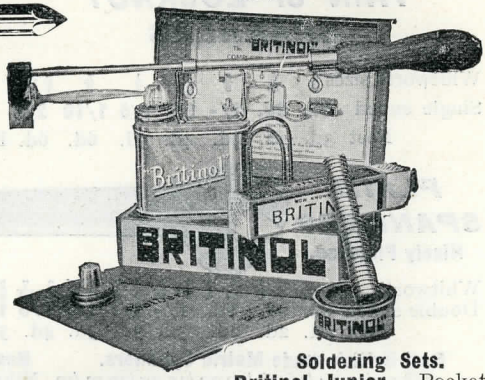


Plus Ten Electric Soldering Iron, 12 in long, for 200/220 or 230/250 volts. 2 yards of twin flex and adapter. **7/6** Post 6d.

Small Light Soldering Irons.

Straight or hatchet bit.

Extra small.	Small.	Medium.	Large.
7d.	**7d.**	**9d.**	**1/-**
Post 2d.	2d.	2d.	2d.

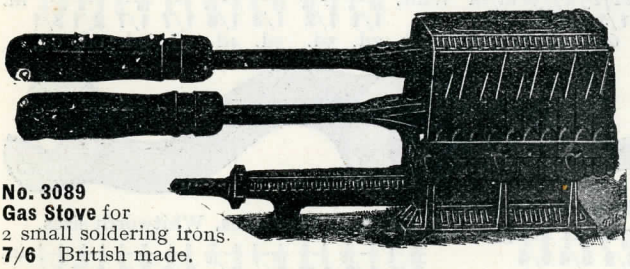


Soldering Sets.

Britinol Junior. Pocket soldering lamp, tin of soldering paste and coil of self-fluxing wire. **4/6** Post 5d.

Britinol Popular, as above, but with the addition of a telescopic soldering iron. **8/6** Post 6d.

British made.



No. 3089 Gas Stove for 2 small soldering irons. **7/6** British made.

Plain Hatchet Soldering Irons.

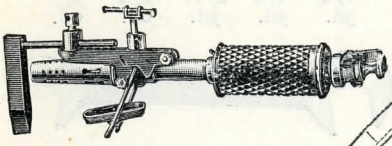
British made.

Bit	4	6	8	12	16 oz.
	1/6	**1/9**	**2/-**	**2/9**	**3/6**
Post	5d.	6d.	6d.	6d.	6d.

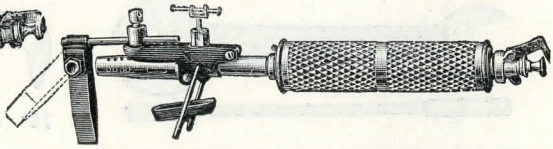
Plain Straight Soldering Irons.

British made.

Bit	2	4	6	8	12	16	24	32 oz.
	1/-	**1/5**	**1/6**	**1/9**	**2/5**	**2/8**	**4/-**	**5/3**
Post	3d.	5d.	6d.	6d.	6d.	6d.	9d.	9d.



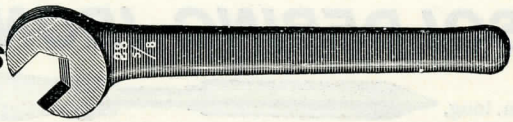
No. 880 Soldering Iron with pump for benzoline or petrol. Hatchet bit holds $\frac{3}{16}$ pint. Weight $2\frac{1}{4}$ lbs. **16/-** Post 9d.



No. 889 Soldering Iron, with pump for benzoline or petrol. Adjustable bit. Holds $\frac{3}{8}$ pint. Weight 3 lbs. **18/-** Post 9d.

PLAIN SPANNERS

Nicely Finished.

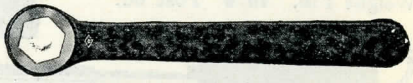


High Quality British made.

Whitworth sizes	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1 in.
Single ended	**7d.**	**7d.**	**8d.**	**11d.**	**1/-**	**1/3**	**1/5**	**1/8**	**2/2**	**2/10**	**4/4**	**5/9**
Post	2d.	2d.	3d.	3d.	4d.	4d.	5d.	5d.	6d.	6d.	9d.	9d.

Best British made.

THIN or LOCKNUT SPANNERS



Closed end Hexagon Spanners.

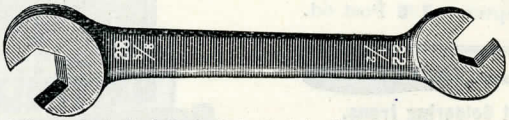
Whitworth sizes.

Whitworth sizes	1/4	5/16	3/8	7/16	1/2	5/8	3/4 in.
Single ended	**8d.**	**9d.**	**1/-**	**1/1**	**1/5**	**1/10**	**2/6**
Post	3d.	3d.	4d.	4d.	5d.	6d.	6d.

	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4 in.
	11d.	**1/-**	**1/3**	**1/6**	**1/9**	**2/1**	**3/2**	**3/11**
Post	2d.	2d.	2d.	4d.	4d.	5d.	6d.	6d.

PLAIN SPANNERS

Nicely Finished.



High Quality British made.

Whitworth	1/8-3/16	1/8-1/4	3/16-1/4	1/4-5/16	1/4-3/8	5/16-3/8	3/8-7/16	3/8-1/2	7/16-1/2	1/2-9/16	1/2-5/8	9/16-5/8	5/8-3/4	3/4-7/8	3/4-1	7/8-1 in.
Double ended	**8d.**	**9d.**	**9d.**	**1/-**	**1/1**	**1/3**	**1/5**	**1/6**	**1/8**	**1/11**	**2/5**	**2/5**	**3/4**	**5/4**	**6/7**	**6/7**
Post	2d.	2d.	2d.	3d.	3d.	3d.	4d.	5d.	6d.	6d.	6d.	6d.	9d.	9d.	9d.	9d.

Best British made Metric Spanners.

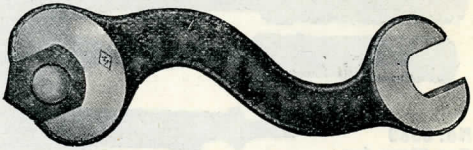
6/8	10/12	14/16	18/20	22/25	27/30 m/m
8d.	**8d.**	**1/-**	**1/5**	**1/11**	**2/5**
Post 2d.	3d.	4d.	5d.	6d.	9d.

Best British made Thin or Locknut Spanners.

Whit.	3/16-1/4	1/4-5/16	5/16-3/8	3/8-7/16	3/8-1/2	7/16-1/2	1/2-5/8	5/8-3/4 in.
	1/1	**1/2**	**1/3**	**1/6**	**1/7**	**1/7**	**2/1**	**3/1**
Post	2d.	3d.	3d.	4d.	5d.	6d.	6d.	9d.

Light S Wrenches. Whitworth sizes.

3/16-1/4	1/4-5/16	5/16-3/8	3/8-7/16	7/16-1/2	1/2-5/8	5/8-3/4 in.
1/5	**1/10**	**2/4**	**3/-**	**3/9**	**5/4**	**5/4**
3d.	3d.	4d.	5d.	6d.	9d.	9d.

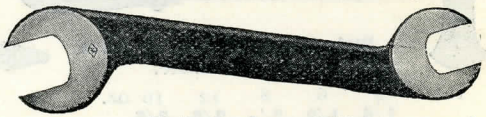


Heavy S Wrenches. Whitworth sizes.

3/16-1/4	1/4-5/16	1/4-3/8	5/16-3/8	3/8-7/16	3/8-1/2	7/16-1/2	1/2-5/8	5/8-3/4 in.
1/1	**1/6**	**1/6**	**2/-**	**2/-**	**2/8**	**2/8**	**3/7**	**5/-**
Post 3d.	3d.	3d.	4d.	6d.	6d.	6d.	6d.	9d.

544A Thin Steel Spanners.

Whitworth	3/16-1/4	5/16-3/8	7/16-1/2 in.
	6d.	**10d.**	**1/3**
Post	2d.	3d.	3d.



Plain Spanners 22½°.

Whit.	3/16-1/4	5/16-3/8	7/16-1/2	9/16-5/8	3/4-7/8 in.
	1/5	**1/9**	**2/10**	**3/9**	**5/-**
Post	3d.	3d.	5d.	6d.	6d.

15° Super Wrenches, Chrome Molydenum. Thin, very light and unbreakable.

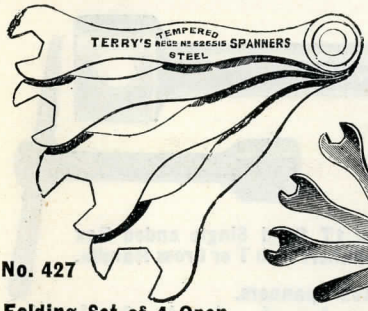
Whit.	1/8-3/16	3/16-1/4	1/4-5/16	5/16-3/8	3/8-7/16	3/8-1/2	7/16-1/2 in.
	2/6	**3/-**	**3/7**	**4/4**	**5/5**	**5/5**	**7/4**
Post	3d.	3d.	3d.	3d.	4d.	4d.	5d.

75° Obstruction Wrenches, Chrome Molydenum.

Whit.	1/8-3/16	3/16-1/4	1/4-5/16	5/16-3/8	3/8-7/16	3/8-1/2	7/16-1/2 in.
	2/6	**3/-**	**3/7**	**4/4**	**5/5**	**5/5**	**7/4**
Post	3d.	3d.	3d.	3d.	4d.	4d.	5d.

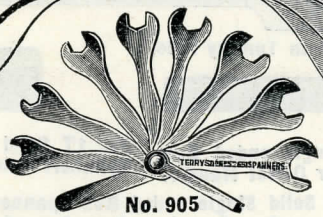
PLAIN and BOX SPANNERS

All British made.



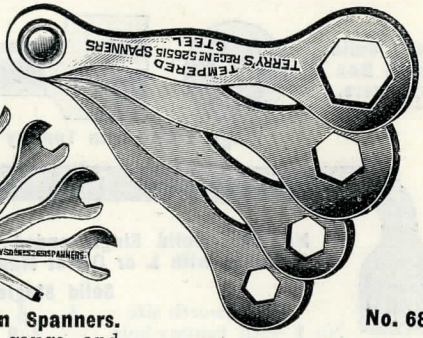
No. 427

Folding Set of 4 Open Spanners.
Midget **6d.** Post 2d.
Cycle **1/3** ,, 3d.
Motor **2/-** ,, 4d.



No. 905

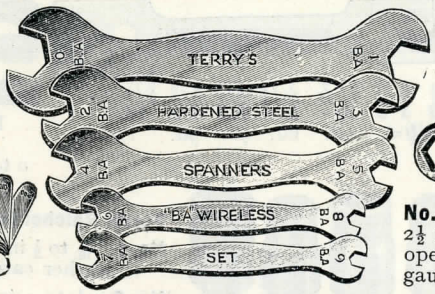
Folding Set of Thin Spanners. With spark gap gauge and screwdriver. Length $1\frac{3}{4}$ in. 3 to 8 m/m openings. **1/4** Post 2d.



No. 684

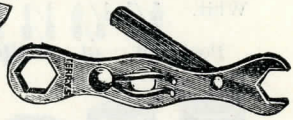
Folding Set of 4 Closed Spanners.
Midget **9d.** Post 2d.
Cycle **1/6** ,, 3d.
Motor **2/3** ,, 4d.

No. 1068 Small BA Folding Set for wireless work, 2, 4 & 6 BA and screwdriver **1/6** Pt. 2d.

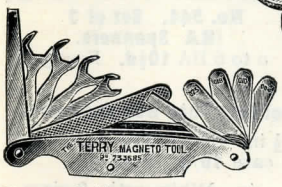


No. 1069 Set of 5 Small BA Spanners. Double-ended, for BA sizes 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. **1/9** Post 2d.

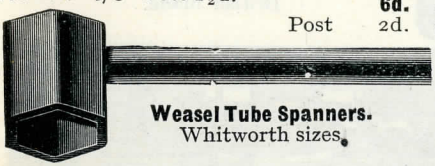
Singly	0/1	2/3	4/5	6/8	7/9
	6d.	**5d.**	**5d.**	**3d.**	**3d.**
Post	2d.	2d.	2d.	2d.	2d.



No. 603 Magneto Spanner. $2\frac{1}{2}$ in. long, 5 and 7 m/m openings, with spark gap gauge. **$4\frac{1}{2}$d.** Post 2d.

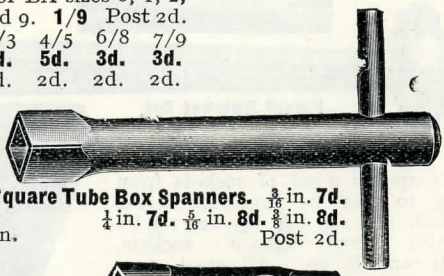


No. 1107 Terry Magneto Tool. Comprises 4 spanners, 4 feeler gauges, screwdriver, file and reamer. **4/9** Post $2\frac{1}{2}$d.

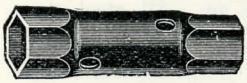


Weasel Tube Spanners. Whitworth sizes.

$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1 in.
4d.	**5d.**	**6d.**	**7d.**	**8d.**	**9d.**	**10d.**	**11d.**	**1/-**	**1/3**
Post 2d.	2d.	2d.	2d.	3d.	3d.	4d.	4d.	5d.	6d.



Square Tube Box Spanners. $\frac{3}{16}$ in. **7d.** $\frac{1}{4}$ in. **7d.** $\frac{5}{16}$ in. **8d.** $\frac{3}{8}$ in. **8d.** Post 2d.



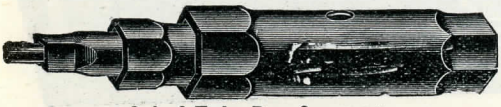
Heavy Gauge

Abingdon Box Spanners, double-ended Whitworth.

$\frac{3}{16}$ & $\frac{1}{4}$	$\frac{5}{16}$ & $\frac{3}{8}$	$\frac{7}{16}$ & $\frac{1}{2}$	$\frac{1}{2}$ & $\frac{5}{8}$ in.
9d.	**1/-**	**1/4**	**1/6**
Post 2d.	2d.	3d.	4d.

Double-ended Box Spanners.

Whit.	$\frac{1}{8}$/$\frac{3}{16}$	$\frac{1}{4}$/$\frac{5}{16}$	$\frac{3}{8}$/$\frac{7}{16}$	$\frac{1}{2}$/$\frac{5}{8}$
Each	**8d.**	**11d.**	**1/2**	**1/8**
Post	2d.	3d.	3d.	3d.



Set of Tube Box Spanners.

Sets of Tube Box Spanners.

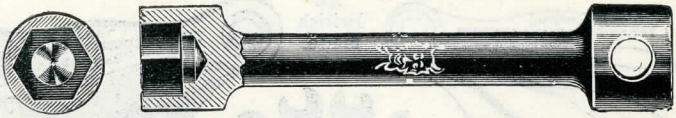
No. 1 Whit., $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{5}{8}$ **2/3** Post 6d.

No. 2 Metric, 6, 7, 8, 10, 12, 15 m/m. **2/6** Post 6d.

No. 10 Whit., $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$ $\frac{5}{8}$, $\frac{3}{4}$, $\frac{7}{8}$ and 1 in. **Loose 7/6** Post 9d.
In Case 11/- Post 1/-

BOX SPANNERS

No. 1 Solid Steel Box Spanners.



Single ended with Tommy hole.

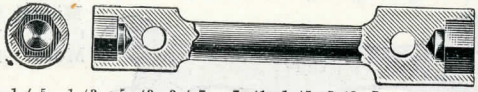
No. 1L. Solid Single ended Box Spanners with L or Offset Handle.

No. 1T Solid Single ended Box Spanners with T or Cross Handle.

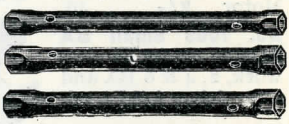
Solid Single ended Box Spanners.

Whitworth size	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1 in.
No. 1 with tommy hole	—	1/8	1/8	1/10	2/6	3/1	3/8	4/9	6/2	7/9	10/-
,, 1L ,, offset handle	1/0	1/3	1/4	1/6	1/10	2/-	2/4	3/-	4/-	—	—
,, 1T ,, cross handle	1/6	1/10	2/-	2/2	2/8	2/10	3/3	4/-	5/6	—	—

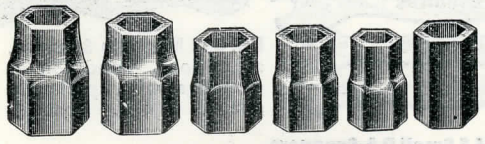
No. 4. Solid Steel double ended.



Whit.	$\frac{3}{16}$/$\frac{1}{4}$	$\frac{1}{4}$/$\frac{5}{16}$	$\frac{1}{4}$/$\frac{3}{8}$	$\frac{5}{16}$/$\frac{3}{8}$	$\frac{3}{8}$/$\frac{7}{16}$	$\frac{7}{16}$/$\frac{1}{2}$	$\frac{1}{2}$/$\frac{5}{8}$	$\frac{5}{8}$/$\frac{3}{4}$	$\frac{7}{8}$/1 in.
	3/8	3/8	3/8	3/8	5/-	5/-	6/7	8/3	14/-
Post	4d.	4d.	5d.	6d.	6d.	6d.	9d.	9d.	1/-



No. 544. Set of 3 BA Spanners.
0 to 6 BA **10½d.** Post 3d.



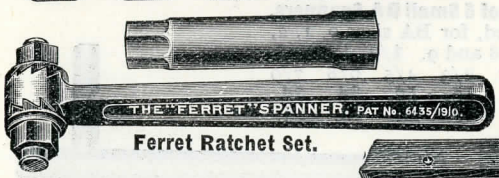
Ferret Ratchet Sets Tube Box Spanners.

No. 1. $\frac{3}{16}$ to $\frac{1}{2}$ in. Whitworth, 6 sizes in leather case **10/9** Post 9d

No. 2. $\frac{1}{2}$ to 1 in. Whitworth, 8 sizes in wood box **30/-** Post 1/3

No. 3. $\frac{3}{16}$ to 1 in. Whitworth, 13 sizes in wood box **55/-** rail.

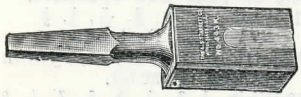
British made.



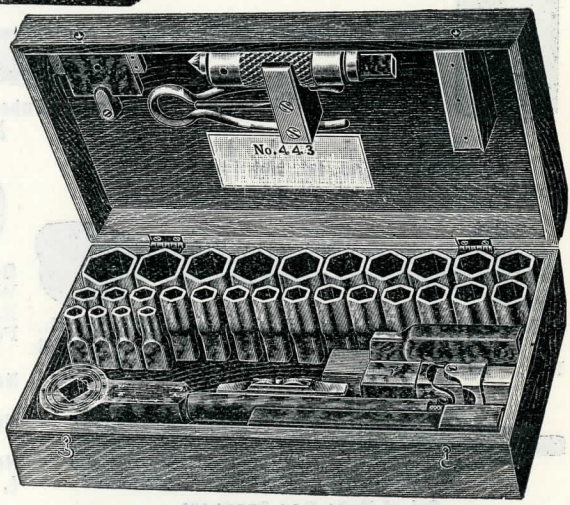
Ferret Ratchet Set.

No. 443. Ratchet Set.
Comprises a set of sockets from $\frac{5}{16}$ to 1 in. by 32nds in. across flats; also 1 $\frac{1}{32}$, 1 $\frac{3}{32}$, 1 $\frac{5}{32}$, and 1 $\frac{9}{32}$ in. Also two square sockets, $\frac{13}{32}$ and $\frac{21}{32}$ in. All steel case-hardened, reversible ratchet brace, universal joint, screw driver with reversible blades, drilling fixture for square shank drills, from $\frac{1}{8}$ in. to $\frac{1}{2}$ in.

443a, with drill fixture, as illustrated **90/6** rail.
443B, no drill fixture **78/9** rail.



No. 443K. Bit Brace Attachment for No. 443. **5/6** Post 3d.

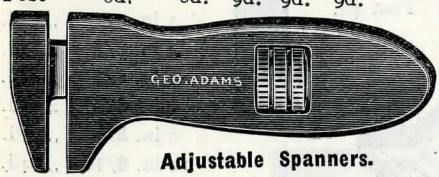


No. 443. Ratchet Set of Tube Box Spanners.

ADJUSTABLE SPANNERS

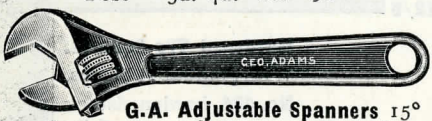
Model Q
British made Wrenches.

Size	6	8	11	12	14	in.
Open	1 5/16	1 3/8	2 1/4	2 1/2	3	,,
Thickness	5/16	3/8	3/8	3/8	9/16	,,
Depth	1	1 1/4	1 1/2	1 1/2	1 3/4	,,
	2/6	**3/3**	**5/-**	**5/6**	**8/9**	
Post	6d.	6d.	9d.	9d.	9d.	



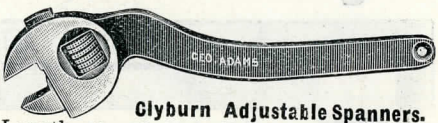
Adjustable Spanners.

King Dick	**No. 0**	**1**	**2**	**3**	British.
Length	3	4	6	9 in.	
Takes up to	5/16	7/16	3/4	1 1/4 in.	Whit.
	1/-	**1/4**	**2/1**	**8/6**	
Post	3d.	4d.	6d.	9d	



G.A. Adjustable Spanners 15°

Length	4	6	8	10	12	15 in.
Opens	1/2	3/4	15/16	1 1/8	1 5/16	1 11/16 in.
	3/-	**3/3**	**3/9**	**4/8**	**7/-**	**10/6**
Post	3d.	4d.	5d.	6d.	6d.	9d.

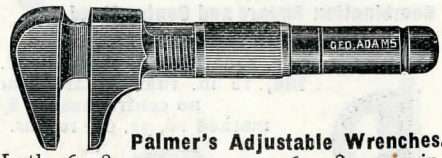


Clyburn Adjustable Spanners.

Length	6	8	14	16	18	21	24 in.
Span	5/8	3/4	1 3/8	1 5/8	1 3/4	2	2 1/4 ,,
Wgt.	4 oz.	10 oz.	2 1/2	2 3/4	4	5 1/2	7 3/4 lbs
	3/6	**4/7**	**8/1**	**9/3**	**10/4**	**12/8**	**16/1**
Post	3d.	5d.	9d.	9d.	9d.	1/-	1/3

Lucas Girder Wrenches.

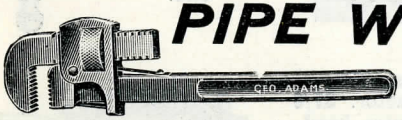
	No.	Length	Span	Each	Post
British.	**90** black	3 1/4 in.	3/4 in.	**3/-**	3d.
	91 black	4 1/2 ,,	1 1/16 ,,	**4/3**	5d.
	93 black	7 1/4 ,,	1 7/8 ,,	**7/3**	6d.



Palmer's Adjustable Wrenches.

Lgth.	6	8	10	12	14	16	18	21	24 in.
Span	1	1 1/4	1 3/4	2 1/4	2 1/2	3	3 1/2	4	4 1/2 ,,
Wgt.	3/4	1 3/4	2 1/2	4	5	6	8 1/2	9 1/2	16 1/2 lbs
	8/8	**10/-**	**12/-**	**14/8**	**18/-**	**21/3**	**26/9**	**32/-**	**37/-**
Post	6d.	9d.	9d.	9d.	1/-	1/-	1/3	1/3	F.O.R.

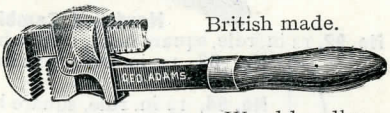
PIPE WRENCHES



British made.

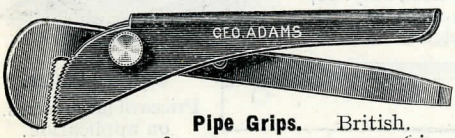
Stillson Wrenches. Steel handles.

8 in.	**4/-**	10 in.	**5/3**	14 in.	**7/-**	18 in.	**10/-**	24 in. **15/6**
Pt.	5d.	6d.		9d.		9d.		1/3



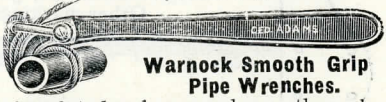
British made.

Stillson Wrenches. Wood handles.
8 in. **4/2** Post 5d. 10 in. **5/9** Post 6d.
14 in. **7/9** Post 9d.



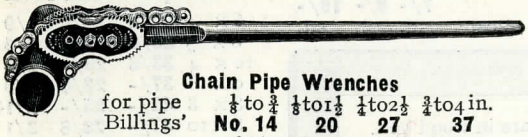
Pipe Grips. British.

	4	5 3/4	7	9	12	14	16 in.
	1/3	**1/6**	**1/10**	**2/11**	**4/6**	**5/6**	**9/-**
Post	3d.	4d.	5d.	6d.	9d.	9d.	1/-



Warnock Smooth Grip Pipe Wrenches.
for plated or lacquered smooth work.
12 in. 1/8 to 2 in. diam. **11/3** Post 9d.
18 in. 1 to 5 in. diam. **21/6** ,, 1/-

Extra Straps
12 in. **1/2** 18 in. **1/4**



Chain Pipe Wrenches

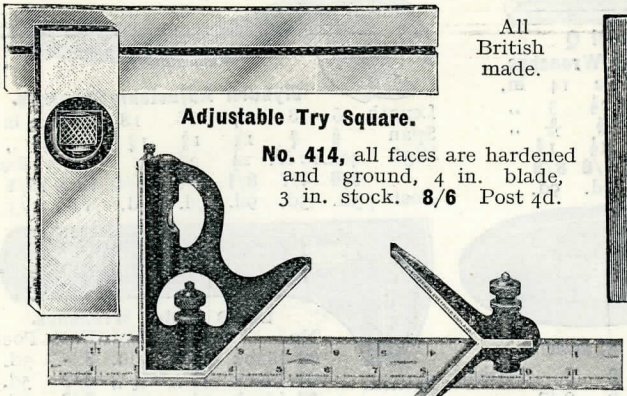
for pipe	1/8 to 3/4	1/8 to 1 1/2	1/4 to 2 1/2	3/4 to 4 in.
Billings'	**No. 14**	**20**	**27**	**37**
	14/3	**19/6**	**28/-**	**39/6**
Vulcan	**No. 30**	**31**	**32**	**33**
	13/-	**18/3**	**26/-**	**36/6**
Post	9d.	1/-	1/3	F.O.R.

Little Giant Pipe Wrenches.

Size	8	10	14	18	24 in.
For pipe to	3/4	1	1 1/2	2	2 1/2 in.
Weight	14 oz.	1 1/2 lbs.	2 3/4 lbs.	4 1/2 lbs.	8 lbs.
	4/2	**4/8**	**6/6**	**9/4**	**13/7**
Post	6d.	6d.	9d.	1/-	1/3

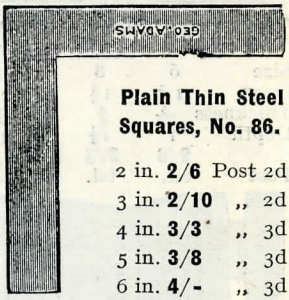
SQUARES and Surface Plates

All British made.



Adjustable Try Square.

No. 414, all faces are hardened and ground, 4 in. blade, 3 in. stock. **8/6** Post 4d.



Plain Thin Steel Squares, No. 86.

2 in.	**2/6**	Post 2d.
3 in.	**2/10**	,, 2d.
4 in.	**3/3**	,, 3d.
5 in.	**3/8**	,, 3d.
6 in.	**4/-**	,, 3d.
8 in.	**5/-**	,, 3d.
12 in.	**6/10**	,, 4d.

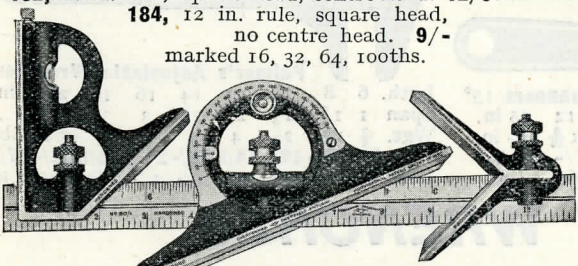
Combination Square and Centre Head.

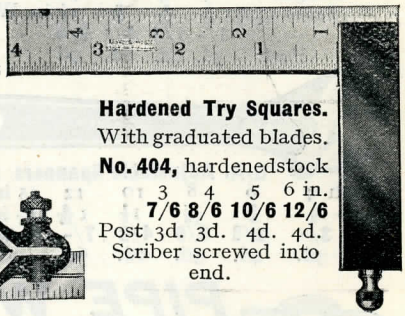
For pattern makers and engineers.

182, 12 in. rule, square head, centre head. **12/6**

184, 12 in. rule, square head, no centre head. **9/-**

marked 16, 32, 64, 100ths.





Hardened Try Squares.

With graduated blades.

No. 404, hardenedstock

3	4	5	6 in.
7/6	**8/6**	**10/6**	**12/6**
Post 3d.	3d.	4d.	4d.

Scriber screwed into end.

Hardened Combination Sets.

No. 92, 12 in. rule, square head, centre head, protractor. **37/6**

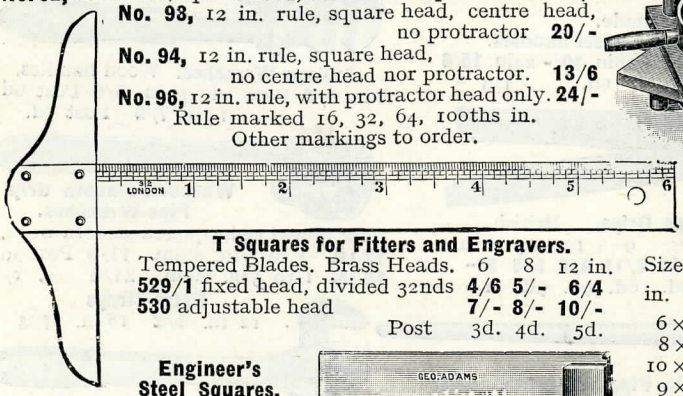
No. 93, 12 in. rule, square head, centre head, no protractor **20/-**

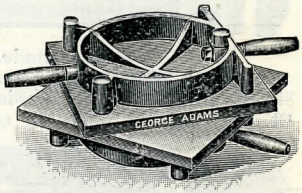
No. 94, 12 in. rule, square head, no centre head nor protractor. **13/6**

No. 96, 12 in. rule, with protractor head only. **24/-**

Rule marked 16, 32, 64, 100ths in.

Other markings to order.





Surface Plates.

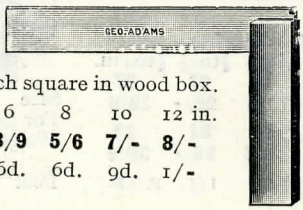
Prices of larger sizes on application.

Size in.	A Scraped	B Planed	Wood Covers
6 × 4	**22/6**	**14/9**	**1/9**
8 × 5	**33/6**	**19/6**	**2/4**
10 × 4	**33/6**	**20/-**	**2/4**
9 × 6	**37/-**	**23/6**	**2/6**
8 × 8	**42/-**	**25/-**	**2/10**
8 × 10	**47/-**	**28/6**	**3/1**
8 × 12	**50/-**	**30/6**	**3/5**
9 × 12	**58/-**	**32/-**	**3/8**
9 × 14	**64/6**	**37/-**	**3/11**
12 × 12	**69/-**	**38/6**	**4/2**

T Squares for Fitters and Engravers.

Tempered Blades. Brass Heads.	6	8	12 in.
529/1 fixed head, divided 32nds	**4/6**	**5/-**	**6/4**
530 adjustable head	**7/-**	**8/-**	**10/-**
Post	3d.	4d.	5d.

Engineer's Steel Squares.

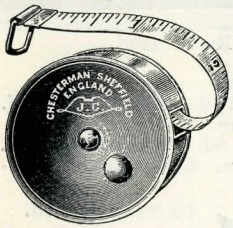


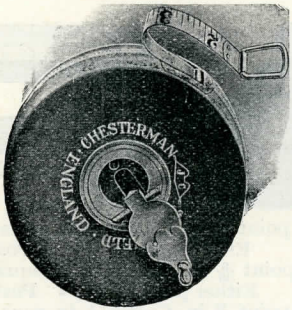
No. 400 precision ground. Each square in wood box.

Size	2	3	4	5	6	8	10	12 in.
	2/6	**2/9**	**3/-**	**3/3**	**3/9**	**5/6**	**7/-**	**8/-**
Post	3d.	3d.	4d.	4d.	6d.	6d.	9d.	1/-

Steel Measuring Tapes

All British made.





Wind-up Tapes 38L, 153.

Wind-up Tapes 1515, 1515m.

Spring Wind Tapes 21SS, 24SS, 36SS.

Spring Wind Steel Tapes.

No. 36SS, marked 16ths in. and metric. Nickel silver case.

Length	3	6	9	12	18ft.
Width	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{5}{16}$	$\frac{5}{16}$ in.
	5/-	**7/6**	**9/10**	**12/1**	**17/-**
Post	2d.	2d.	3d.	4d.	4d.

With Linen Tape.

No. 21SS Brass Case, $\frac{5}{16}$ in. linen tape, marked English and metric.
9 ft. **5/-** 12 ft. **5/9** 18 ft. **9/10**
Post 3d. 3d. 4d.

No. 24SS German silver case, as **21SS.**

3 ft.	6 ft.	9 ft.	12 ft.	18 ft.
3/7	**5/-**	**6/7**	**8/3**	**13/2**
Pst. 2d.	2d.	3d.	4d.	4d.

Steel Wind-up Tapes, Leather Cases, Flush Handles.

No. 1515, nickel-plated fittings, $\frac{1}{4}$-in. steel tape, marked inches and 16ths on front, links and poles on back.
25 ft. **12/-** 33 ft. **13/-** 50 ft. **18/-** 66 ft. **22/-**
Post 4d. 5d. 6d. 6d.

No. 1515M, as No. 1515 but marked English and metric.
25 ft. **13/-** 33 ft. **15/-** 50 ft. **22/-** 66 ft. **27/-**
Post 4d. 5d. 6d. 6d.

No. 38L, brass fittings, $\frac{3}{8}$ in. steel tape, marked feet, inches and 8ths one side, links and poles on back.
25ft. **13/-** 33ft. **15/-** 50ft. **20/-** 66ft. **24/-** 100ft. **34/-**

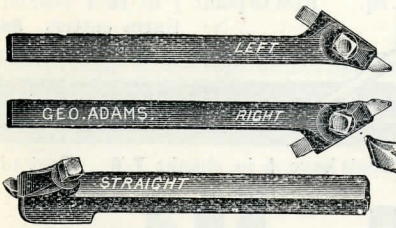
No. 38LR Best Rustless Steel Tape, as 38L.
25ft. **15/-** 33ft. **17/-** 50ft. **23/-** 66ft. **28/-** 100ft. **40/-**
Post 4d. 5d. 6d. 6d. 6d.

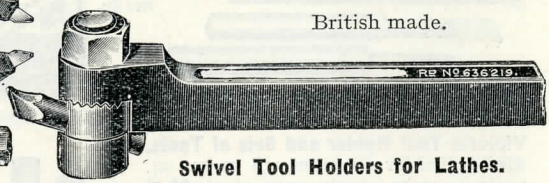
No. 153, brass fittings, $\frac{1}{2}$-in steel tape, marked as 38L.
25ft. **15/-** 33ft. **18/-** 50ft. **24/-** 66ft. **30/-** 100ft. **42/-**

No. 153R Best Rustless Steel Tape, as No. 153.
25ft. **17/-** 33ft. **20/9** 50ft. **28/-** 66ft. **35/-** 100ft. **50/-**
Post 4d. 5d. 6d. 6d. 6d.

TOOL HOLDERS

British made.



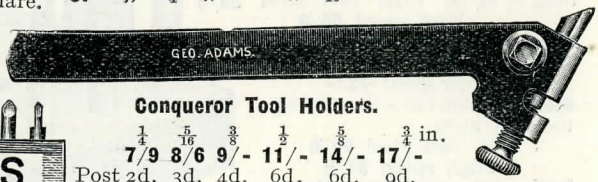


Swivel Tool Holders for Lathes.

A.	Shank $\frac{1}{2}$ in. sq.	Tool $\frac{5}{16}$ in. rd.	**10/6**	Post 5d.
B.	,, $\frac{5}{8}$,,	,, $\frac{5}{16}$,,	**13/3**	,, 6d.
C.	,, $\frac{3}{4}$,,	,, $\frac{7}{16}$,,	**18/-**	,, 6d.

GA Dropped head Tool Holders. Straight, Right, Left, same price.

Shank	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in. square.
Tool	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$,,
	5/6	**8/1**	**10/9**	**13/5**
Post	3d.	4d.	6d.	9d.



Conqueror Tool Holders.

	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
	7/9	**8/6**	**9/-**	**11/-**	**14/-**	**17/-**
Post	2d.	3d.	4d.	6d.	6d.	9d.

Set of 12 Tools for Conqueror Tool Holders.

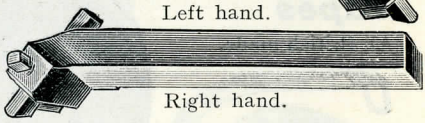
Sets of Tools.

	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
	3/9	**4/6**	**5/3**	**6/9**	**9/9**	**12/6**
Post	2d.	2d.	3d.	4d.	5d.	5d.

TOOL HOLDERS

Straight **Dropped Head Tool Holder,** British made.

Left hand.

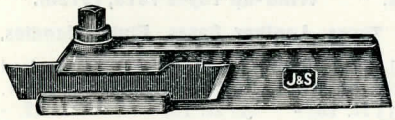


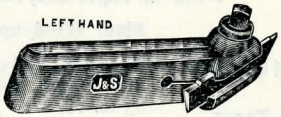
Right hand.

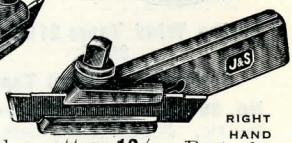
No. 01, holder $\frac{1}{2} \times \frac{9}{16} \times 4\frac{1}{2}$ in. Base to point $\frac{7}{16}$ in. Cutter $\frac{3}{16}$ in. square. Either pattern **11/-** Post 4d. Extra cutters **4d.**

No. 11, holder $\frac{1}{2} \times \frac{5}{8} \times 6$ in. Base to point $\frac{9}{16}$ in. Cutter $\frac{3}{16}$ in. square. Either pattern **11/-** Post 6d. Extra cutters **4d.**

No. 12, holder $\frac{5}{8} \times \frac{3}{4} \times 7\frac{1}{2}$ in. Base to point $\frac{11}{16}$ in. Cutter $\frac{1}{4}$ in. square. Either pattern **12/-** Post 6d. Extra cutters **6d.**





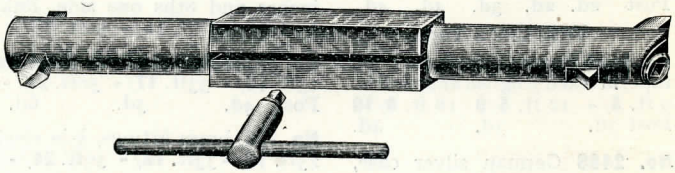


Straight **Side or Knife Tool Holder,** British made.

No. 40, holder $\frac{1}{2} \times \frac{19}{32}$ in. Base to point $\frac{7}{16}$ in. Cutter $\frac{5}{8} \times \frac{5}{32}$ in. Either pattern **12/-** Post 5d. Spare blades **1/3**

No. 41, holder $\frac{5}{16} \times \frac{3}{4}$ in. Base to point $\frac{11}{16}$ in. Cutter $\frac{1}{2} \times \frac{1}{8}$ in. Either pattern **12/-** Post 6d. Spare blades **1/3**

Double ended Boring Bar. British made.

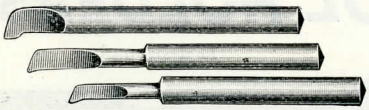


Complete with key.

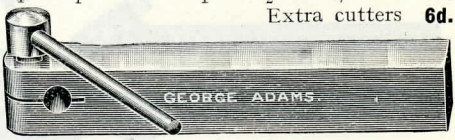
No. 92, Bar $\frac{3}{8} \times 4\frac{1}{2}$ in. Cutter $\frac{1}{8}$ in. Block $2\frac{1}{8} \times \frac{1}{2}$ in. sq. Rest to point $\frac{5}{16}$ in. **8/8** Post 6d. Extra cutters **3½d.**

No. 93, Bar $\frac{7}{16} \times 5\frac{1}{4}$ in. Cutter $\frac{3}{16}$ in. Block $2\frac{1}{2} \times \frac{5}{8}$ in. sq. Rest to point $\frac{13}{32}$ in. **13/9** Post 6d. Extra cutters **4½d.**

No. 94, Bar $\frac{9}{16} \times 6\frac{3}{4}$ in. Cutter $\frac{1}{4}$ in. Block $3 \times \frac{3}{4}$ in. sq. Rest to point $\frac{1}{2}$ in. **16/1** Post 6d. Extra cutters **6d.**



British made.



GA Extra Small Boring Tool Holder, with 3 tools for holes $\frac{1}{8}$, $\frac{3}{16}$, $\frac{1}{4}$ in. Holder $\frac{1}{2}$ in. sq. Tools have $\frac{3}{16}$ in. shanks **7/6** Post 3d.

Victoria Tool Holder and Sets of Tools.

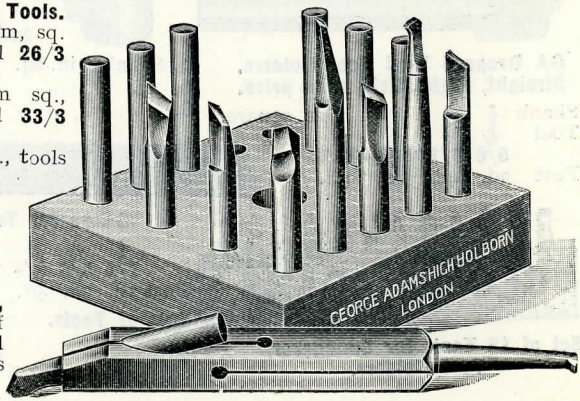
Size 0, holder 80 m/m. × 8 m/m, sq. tools 6 m/m, tools cast steel **26/3** High speed **41/9**

Size 1, holder 100 × 12 m/m sq., tools 8 m/m, tools cast steel **33/3** High speed **55/9**

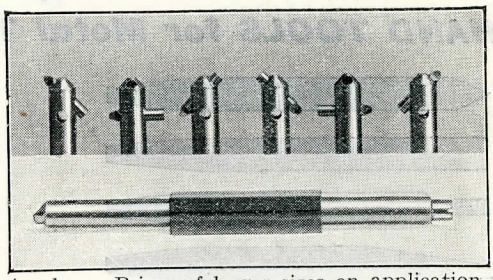
Size 2, holder 120 × 16 m/m sq., tools 12 m/m, tools cast steel **41/9** High speed **73/-**

Size 3, holder 140 × 20 m/m sq., tools 15 m/m, tools cast steel **50/6** High speed **97/6**

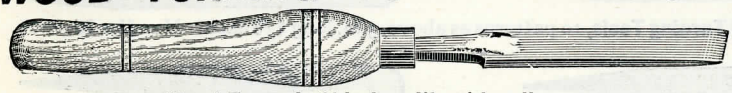
Each set comprises Holder, 9 finished tools and 6 blanks of either cast steel or high-speed steel, **mounted on oak block,** as illustrated.



Model X Boring Tool Holder. British.
Comprising: Boring bar, H/S Cutter and Shoe.
1X Bar $4\frac{1}{2} \times \frac{5}{16}$ in. Cutter $\frac{1}{8}$ in. Shoe $2\frac{1}{4} \times \frac{1}{2}$ in. sq. Weight 4 ozs. **11/6**
Extra Cutters **2/6** doz.
2X Bar $6 \times \frac{1}{2}$ in. Cutter $\frac{3}{16}$ in. Shoe $2\frac{3}{4} \times \frac{5}{8}$ in. sq. Weight 8 ozs. **17/6**
Extra Cutters **4/6** doz.
3X Bar $8 \times \frac{5}{8}$ in. Cutter $\frac{1}{4}$ in. Shoe $3\frac{1}{4} \times \frac{3}{4}$ in. sq. Weight 14 ozs. **21/-**
Extra Cutters **6/-** doz.
Illustration shews the various positions in which the cutter can be set in the boring bar. Prices of larger sizes on application.

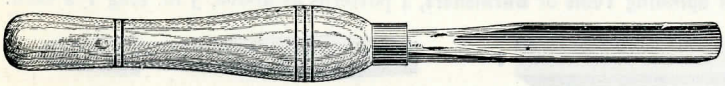


WOOD TURNING TOOLS Ordinary Size



Wood Turner's Chisels, without handles.

Width	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$ in.
	9d.	**9d.**	**10d.**	**1/-**	**1/1**	**1/2**	**1/5**	**1/10**	**2/5**
Post	2d.	2d.	3d.	3d.	3d.	4d.	4d.	5d.	6d.



Wood Turner's Gouges, without handles.

Width	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	1	$1\frac{1}{4}$	$1\frac{1}{2}$ in.
	1/-	**1/-**	**1/2**	**1/3**	**1/5**	**1/8**	**2/1**	**2/6**	**3/5**
Post	2d.	2d.	3d.	3d.	3d.	4d.	4d.	5d.	6d.

V Tools, no handles $\frac{3}{8}$ in. **2/-** Post 3d. $\frac{1}{2}$ in. **2/1** Post 3d.

Wood Turner's Tool Handles.
10 in. **10d.**
Post 3d.

Parting Tools.
No handles.
1/3 Post 3d.

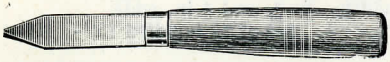
WOOD TURNING TOOLS
SMALL SIZE

VW 1

VW 2

VW 3

VW 4

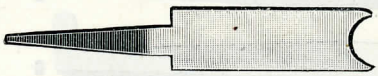


VW 5

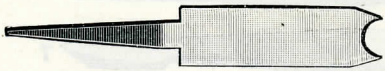
VW 6

Plain Handled Wood Turning Tools.
6 patterns, **1/6** each.

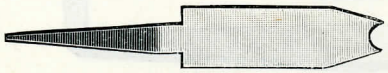
VW 7



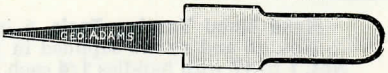
VW 8



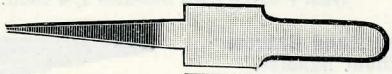
VW 9



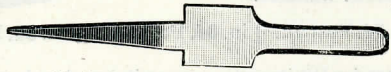
VW 10



VW 11

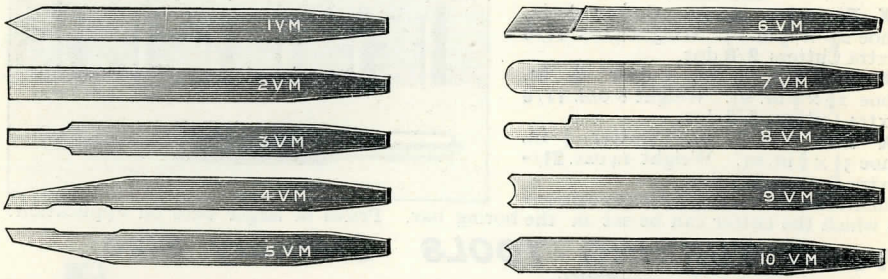


VW 12



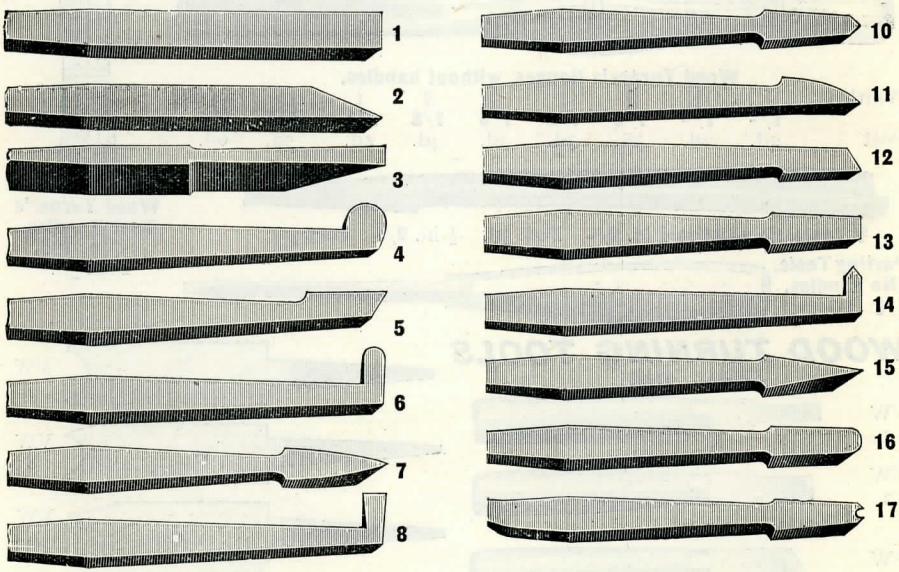
Hollow and Round Bead Wood Turning Tools. $\frac{1}{4}$, $\frac{3}{8}$, and $\frac{1}{2}$ in. Not handled **1/6** each. Handles, **3d.** each extra.

HAND TOOLS for Metal Turning *All British Made.*



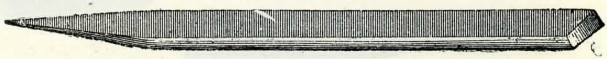
Extra Small Metal Turning Tools, 10 patterns as above, 3 in. long **1/6** each. Handles **3d.** each.

Extra Small Metal Spinning Tools or **Burnishers,** 4 patterns as above, 5 in. long **1/9** each.



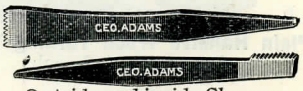
Hand Metal Turning Tools, 6 in. long. Brass Finisher's types.
Nos. 16 and 17 are supplied in 3 widths, $\frac{1}{8}$, $\frac{3}{16}$ and $\frac{1}{4}$ in. wide.
Nos. 1 to **17** with handles **1/4** each. Post 2d. **Set of 12 handled 15/-** Post 9d.

Square Hand Gravers without handles.



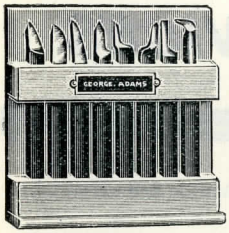
$\frac{3}{16}$ in. **5d.** Post 2d. $\frac{1}{4}$ in. **6d.** Post 2d. $\frac{5}{16}$ in. **8d.** Post 2d. $\frac{3}{8}$ in. **10d.** Post 3d. $\frac{1}{2}$ in. **1/2** Post 3d.

Chasers for Whitworth screw pitches, inside or outside, 4, 5, 6, 7, 8, 9 or 10 threads **1/4** each 11 to 60 threads **11d.** each
Do. for Metric,
.5, .75, 1, 1.25, 1.5, 1.75, 2, 2.5, 3 m/m pitch **1/4** each
Do. for BA Pitches, outside chasers only, 0-8 BA **1/-** each



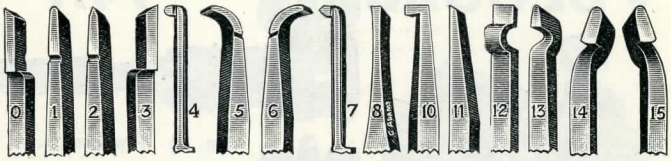
Outside and inside Chasers.

METAL TURNING TOOLS



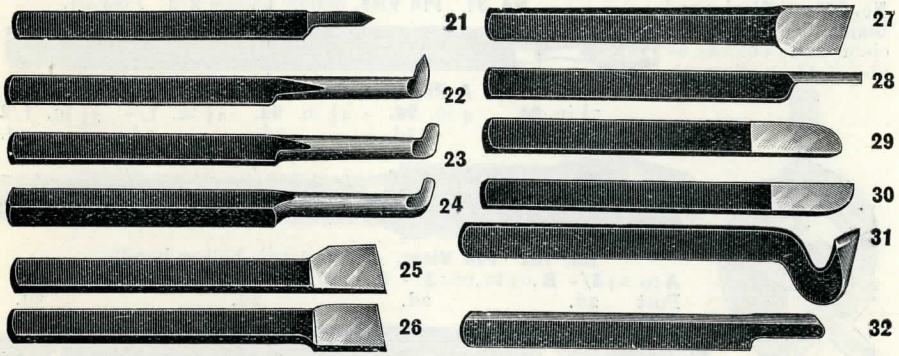
Racks of 8 Cast Steel Tools.

$\frac{1}{4}$ in.	$\frac{5}{16}$ in.	$\frac{3}{8}$ in.
3/3	**4/6**	**5/9**
Post 6d.	6d.	9d.

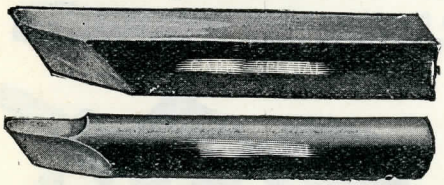


Slide Rest Turning Tools, with Square Shanks. Ordinary length.

Cast Steel	$\frac{1}{4}$ in. **10d.**	$\frac{5}{16}$ in. **1/-**	$\frac{3}{8}$ in. **1/1**	$\frac{1}{2}$ in. **1/9**	$\frac{5}{8}$ in. **2/6**	$\frac{3}{4}$ in. **3/6** ea.
High Speed	,,	,, **2/6**	,, **3/8**	,, **5/7**	,, **8/3** ,,	
	Post 2d.	2d.	3d.	4d.	5d.	6d.



Slide Rest Turning Tools for Drummond Lathes, $3\frac{1}{2}$ and 4 in. $\frac{3}{8}$ in. square, cast steel **1/1** High Speed **2/6** ea.



High Speed Steel Tools for Tool Holders.
Supplied in four different useful shapes.

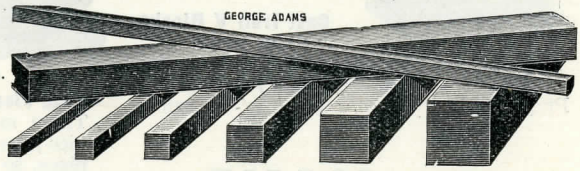
	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$ in.
Square	**6d.**	**8d.**	**9d.**	**1/3**	**1/10**	**4/6** ea.
Round	**6d.**	**8d.**	**9d.**	**1/3** ea.		

Square High Speed Steel in 12 in. lengths.

$\frac{3}{16}$ in.	$\frac{1}{4}$ in.	$\frac{5}{16}$ in.	$\frac{3}{8}$ in.
9d.	**1/2**	**1/10**	**2/9** ea.

Best Quality **Square Cast Steel** in 24 in. lengths.

$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$ in.
9d.	**1/2**	**1/8**	**2/6**	**4/6**	**5/6** ea.



Square Silver Steel, bright, in 13 in. straight lengths.
$\frac{1}{16}$ in. **2d.** $\frac{3}{32}$ in. **2d.** $\frac{1}{8}$ in. **3d.** $\frac{5}{32}$ in. **4d.** $\frac{3}{16}$ in. **6d.** $\frac{1}{4}$ in. **8d.** $\frac{5}{16}$ in. **1/-** $\frac{3}{8}$ in. **1/6** $\frac{1}{2}$ in. **2/6** ea.

TWEEZERS

Bent Tweezers 9d. ea. Post 2d.

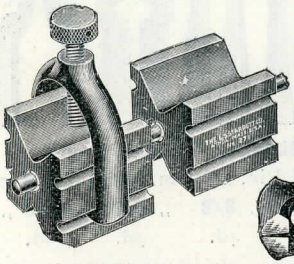
V Pocket Tweezers in metal sheaths **1/3** Post 2d.

Flat Tweezers 1/- ea. Post 2d.

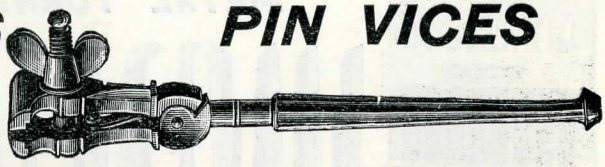
Hollow Tweezers 1/- ea. Post 2d.

V BLOCKS

PIN VICES

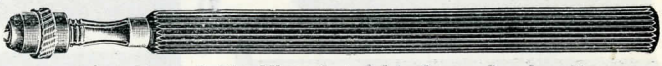


No. 271c V Blocks and Clamp. Set comprises 1 clamp and 2 Vblocks, as above **15/-** Post 6d.



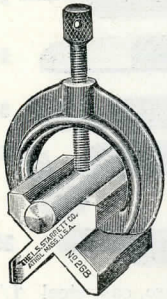
No. 33 Pin Vice, solid handle **2/3** Post 2d.

No. 37 Pin Vice, hollow handle **2/3** Post 2d.

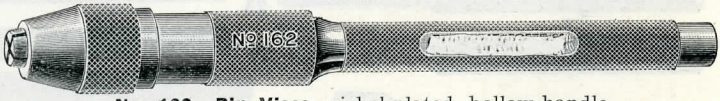


Type A Pin Vice, fluted black wooden handle.

$3\frac{1}{2}$ in. **9d.**	4 in. **9d.**	$4\frac{1}{4}$ in. **9d.**	$4\frac{3}{4}$ in. **1/-**	$5\frac{1}{4}$ in. **1/2**
Post 2d.	2d.	2d.	2d.	2d.



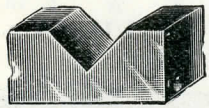
No. 268c V Blocks and Clamp Set. Comprises 1 clamp and 2 V blocks. **8/6** Post 9d.

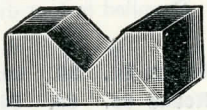


No. 162 Pin Vices, nickel-plated, hollow handle.

A to .04 **3/-** **B** .03 to .062 **3/-** **C** .05 to .125 **3/-** **D** .115 to .187 in. **3/6**
Post 2d. 2d. 2d. 3d.

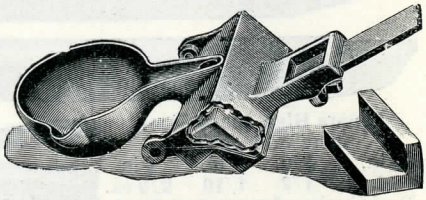
Type B Pin Vice, 2 chucks, fluted brass handle.
No. 8 **1/4** No. 9 **1/6** No. 10 **1/8** No. 11 **1/9**
Post 2d. 2d. 2d. 2d.





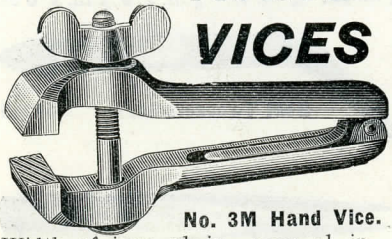
Cast Iron V Blocks in pairs.

$1\frac{1}{2} \times \frac{3}{4}$	2×1	$2\frac{1}{2} \times 1\frac{1}{4}$	$3 \times 1\frac{1}{2}$	4×2	6×3 in.
2/6	**4/-**	**4/6**	**5/6**	**7/6**	**14/-**
Pt. 5d.	6d.	6d.	9d.	1/-	rail

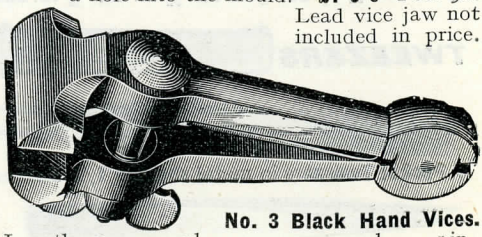


Lead Vice Jaw Mould, showing jaw as cast. These moulds are for casting soft lead vice jaws. The mould and ladle are in one piece, so when the lead is melted, tilting the handle allows the metal to flow through a hole into the mould. **£1 0 0** Post 9d. Lead vice jaw not included in price.

HAND VICES



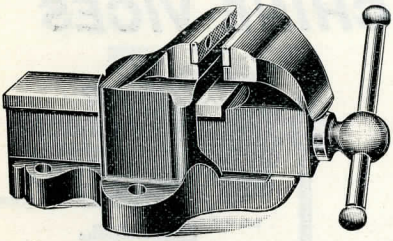
No. 3M Hand Vice.
Width of jaws $1\frac{1}{2}$ in., open $1\frac{1}{2}$ in., length 5 in. Weight 1 lb.
8/9 each Post 6d.



No. 3 Black Hand Vices.

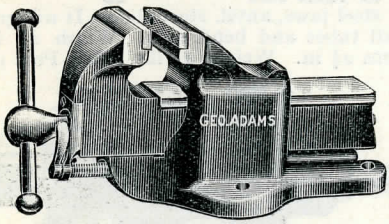
Length	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5 in.
Each	**2/4**	**2/4**	**2/6**	**2/7**	**3/-**
Post	4d.	4d.	6d.	6d.	6d.

BENCH VICES



Engineer's Bench Vices. British made.
Cast iron body, tool-steel jaws.

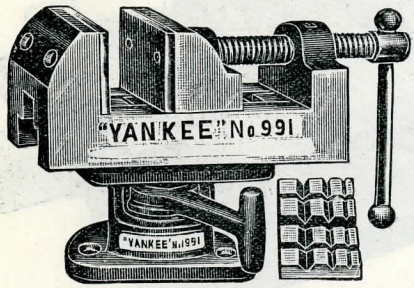
Wdt.	2¼	2½	3	3½	4	4½	5	6 in.
Wgt.	6½	7	10½	18½	27	43	60	70 lbs.
	7/1	**8/1**	**9/9**	**13/2**	**16/10**	**22/6**	**27/8**	**37/1**



Instantaneous Grip Bench Vices.
Fixed type. British made.
Cast iron body, tool-steel jaws.

Width of jaws	3¼	3¾	4¼	5¼	6 in.
Weight	33	39	57	73	76 lbs.
Fixed type	**23/-**	**27/8**	**33/1**	**40/6**	**47/5**
Swivel type	**29/9**	**35/1**	**41/2**	**50/7**	**59/5**

Swivel bases can always be procured separately and a fixed type turned into a swivel type at once.



"Yankee" Revolving Bench Vice.

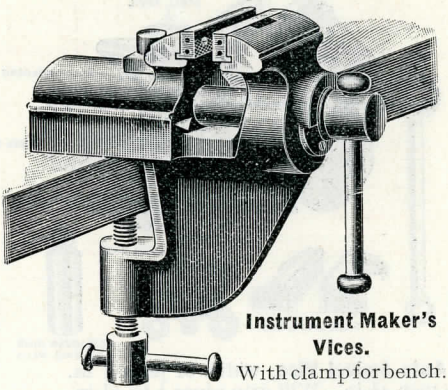
1991 Jaws 1½ in. wide, ⅞ in. deep, open 1½ in., weight 2 lbs. 6 ozs. **£1 1 4** Post 9d.

1992 Jaws 2 in. wide, 1¼ in. deep, open 1 15/16 in., weight 5 lbs. 7 ozs. **£1 12 0** Post 1/-

1993 Jaws 2¾ in. wide, 1⅞ in. deep, open 3⅛ in., weight 13 lbs. 6 ozs. **£2 12 6** F.O.R.

No. 683 British made pattern as **1993 35/-**

1994 Jaws 4 in. wide, 2⅛ in. deep, open 4 in., weight 41 lbs. **£6 2 6** F.O.R.



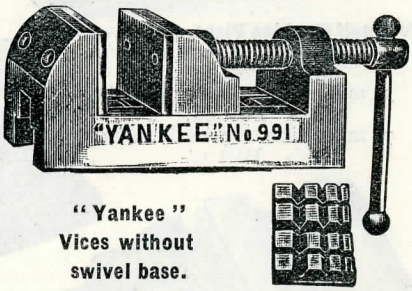
Instrument Maker's Vices.
With clamp for bench.

In these vices the front jaw is the fixed one and the rear jaw moves along nicely machined V slides. This always brings the jaws parallel together. Each jaw carries a steel plate.

Width of jaws 1⅞ in., opens to 2¼ in., wt. 4½ lbs.
No. 151 Blue enamelled, parts plated **17/6** Post 1/-
No. 161 Black, parts bright **13/9** Post 1/-

Width jaws 2 5/16 in., opens to 2½ in., wt. 6 lbs.
No. 152 Blue enamelled, parts plated **19/-** Post 1/-
No. 162 Black, parts bright **15/3** Post 1/-

Width jaws 2¾ in., opens to 2¾ in., wt. 7¼ lbs.
No. 155 Blue enamelled, parts plated **20/3** Post 1/-
No. 165 Black, parts bright **16/6** Post 1/-



"Yankee" Vices without swivel base.

991 Jaws 1½ in. wide, ⅞ in. deep, open 1½ in. **16/1** Post 6d.

992 Jaws 2 in. wide, 1¼ in. deep, open 1 15/16 in. **21/4** Post 9d.

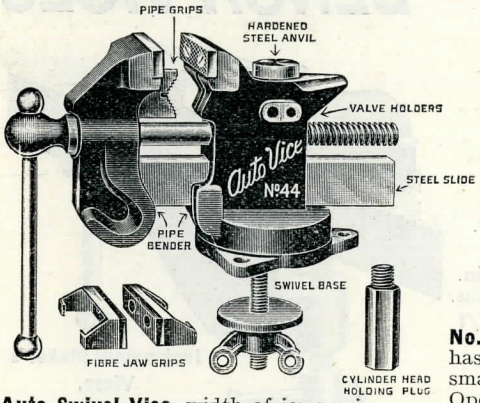
993 Jaws 2¾ in. wide, 1⅞ in. deep, open 3⅛ in. **39/-** rail.

994 Jaws 4 in. wide, 2⅛ in. deep, open 4 in. **87/6** rail.

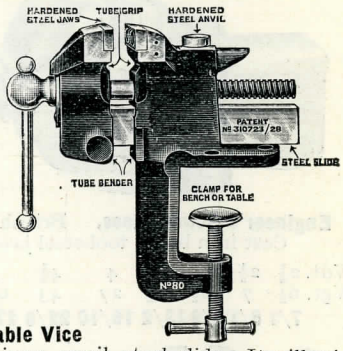
681 Jaws 2⅜ in. wide, 1⅜ in. deep, open 2⅞ in. British made pattern **12/-** Post 6d.

682 as **993** British made pattern **25/-** rail.

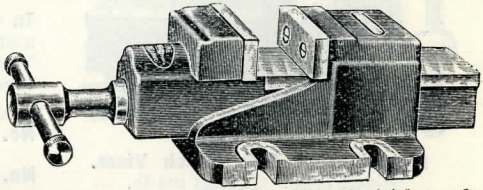
BENCH and MACHINE VICES



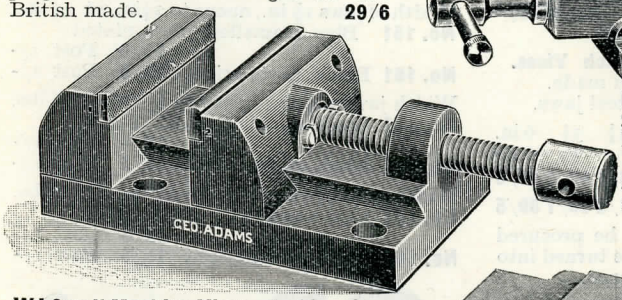
Auto Swivel Vice, width of jaws 4 in. Open $4\frac{1}{2}$ in. Will grip pipes $\frac{1}{8}$ to $1\frac{1}{2}$ in. Hardened steel anvil. Adjustable pipe and rod bender. Supplied with loose fibre jaw grip, cylinder head holding plug. Steel slide. Weight 26 lbs. British made. **29/6**



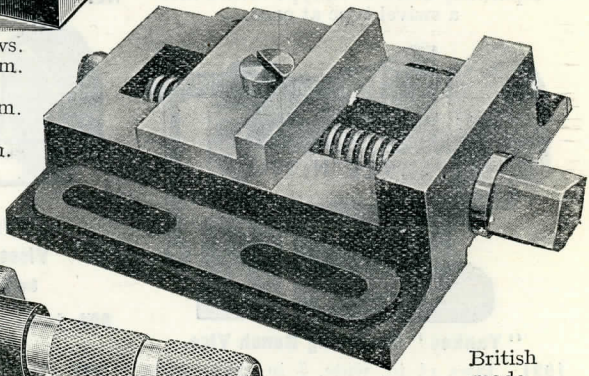
No. 80 Table Vice has steel jaws, anvil, steel slide. It will grip small tubes and bend rods. Width $2\frac{1}{4}$ in. Opens $2\frac{1}{2}$ in. Weight $4\frac{1}{4}$ lbs. **8/6** Post 1/-



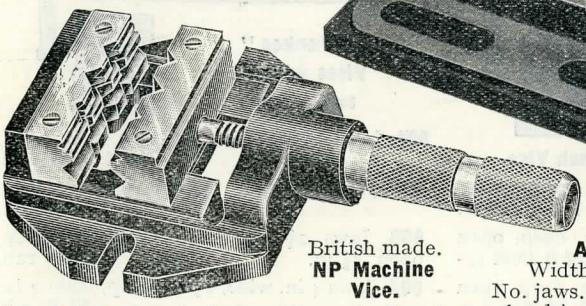
Machine Vice, British made.
242. Width 2 in. Opens 2 in. Depth of jaws $\frac{3}{4}$ in. Weight 5 lbs. **17/-**
243. Width 3 in. Opens $2\frac{1}{2}$ in. Depth of jaws $1\frac{1}{8}$ in. Weight 13 lbs. **24/-**



WJ Small Machine Vices, steel jaws.
0. 45 m/m wide. Opens 25 m/m. **31/3** Post 6d.
1. 55 m/m wide. Opens 40 m/m. **33/-** Post 9d.
2. 70 m/m wide. Opens 60 m/m. **39/-** Post 1/-



British made.

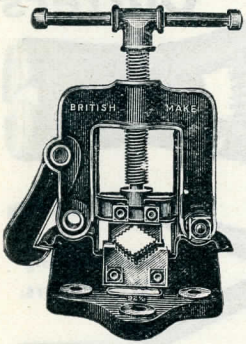


British made.
NP Machine Vice.
Jaws of hardened steel, with vertical and horizontal Vees. Width of jaws $3\frac{1}{4}$ in. Depth of jaws $1\frac{3}{16}$ in., opening above 2 in., opening below $1\frac{3}{4}$ in. Weight 7 lbs. **£1 0 0** Post 1/-

AF Small Machine Vices.

No.	Width jaws.	Open.	Depth jaws.	Weight.		Post.
1	$1\frac{1}{2}$ in.	$1\frac{3}{4}$ in.	$\frac{3}{4}$ in.	4 lbs.	**17/6**	1/-
3	2 in.	$1\frac{3}{4}$ in.	$\frac{7}{8}$ in.	5 lbs.	**19/6**	1/-
5	$2\frac{1}{2}$ in.	2 in.	1 in.	6 lbs.	**23/6**	1/3
8	3 in.	4 in.	$1\frac{3}{8}$ in.	14 lbs.	**35/-**	Rail.

PIPE VICES



British made.

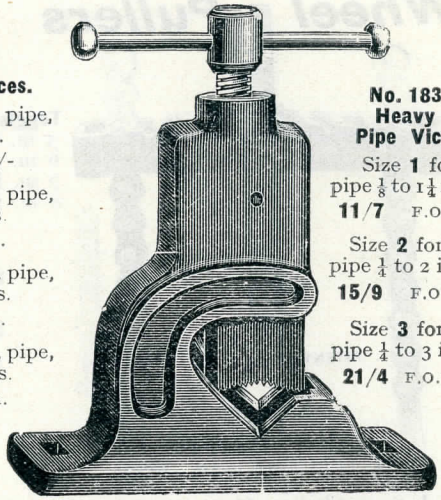
Hinged Pipe Vices.

No. 91½ ⅛ to 1½ in. pipe, weight 5 lbs.
10/- Post 1/-

No. 92 ⅛ to 2 in. pipe, weight 8 lbs.
11/10 F.O.R.

No. 92½ ⅛ to 2½ in. pipe, weight 10 lbs.
13/10 F.O.R.

No. 93½ ½ to 3½ in. pipe, weight 18 lbs.
21/10 F.O.R.

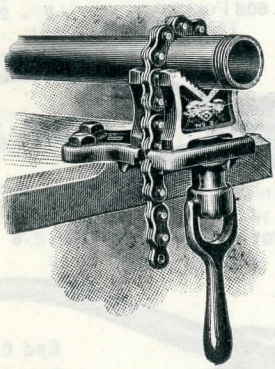


No. 183 Heavy Pipe Vice.

Size **1** for pipe ⅛ to 1¼ in.
11/7 F.O.R.

Size **2** for pipe ¼ to 2 in.
15/9 F.O.R.

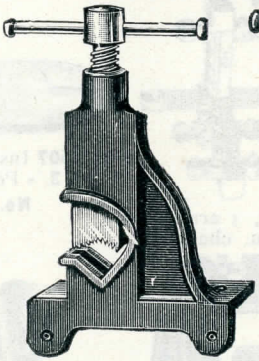
Size **3** for pipe ¼ to 3 in.
21/4 F.O.R.



Chain Pipe Vices. British made.

No. 1, for pipe ⅛ to 2 in., weight 4 lbs.
15/3 Post 1/-

No. 2, for pipe ¼ to 4 in., weight 10 lbs.
32/9 Post 1/3

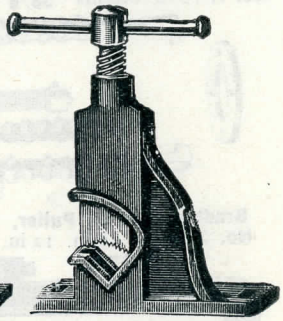


182 Light Pipe Vice with side flange.

For pipe

1	1a	2
⅛ to 1⅛	⅛ to 1½	¼ to 2 in.
9/3	**12/4**	**15/6**

F.O.R.

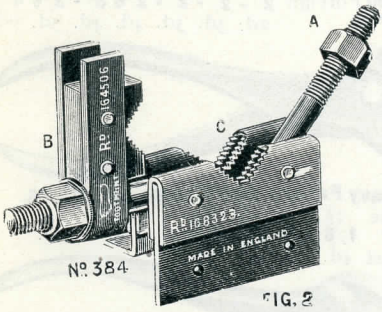


182A Light Pipe Vice with flat foot.

For pipe

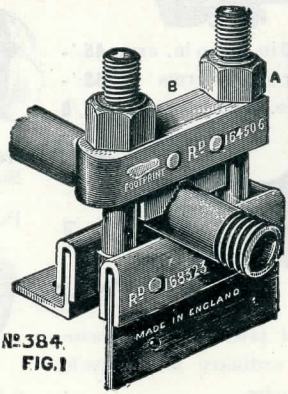
1	1a	2
⅛ to 1	⅛ to 1½	¼ to 2in.
9/3	**12/4**	**15/6**

F.O.R.

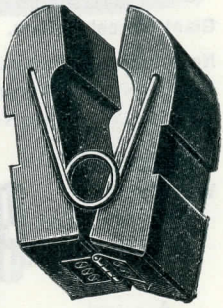


Footprint Pipe Vices.

526 pocket, ⅛ to ¾in. pipe **4/9** Post 6d.
381 ¼ to 2 in. pipe **13/-** Post 1/-
384 ⅛ to 1½ in. pipe **10/-** Post 1/3
385 ½ to 3 in. pipe **25/6** F.O.R.



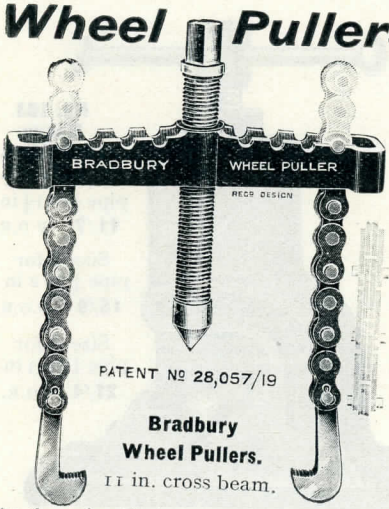
No. 384. FIG. 1



Wood Vice Clamps.

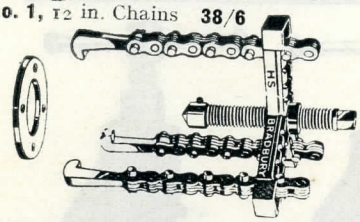
2 in. **1/-** Post 3d.
2½ in. **1/3** Post 4d.
3 in. **1/6** Post 6d.

Wheel Pullers

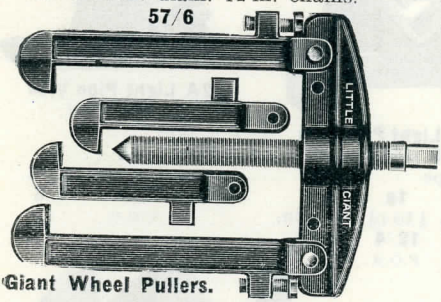


Bradbury Wheel Pullers.
11 in. cross beam.

No. 1, 12 in. Chains **38/6**



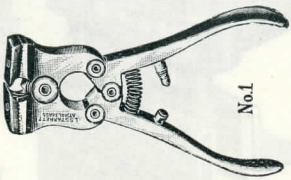
Bradbury Wheel Puller, 3 arm.
No. 3 11 in. diam. 12 in. chains.
57/6



Giant Wheel Pullers.

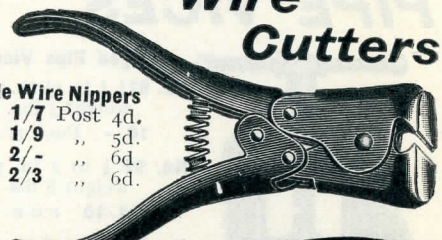
No. 1 10 in. beam with 6 in. and 9 in. arms **45/-**
No. 2 as No. 1 with pair of bent arms **55/-**
No. 3 Miniature set as No. 1 for motorcycles **27/6**

Adjustable Jaw Wire Cutters.
5½ in. **23/-** Post 5d.
7 in. **29/6** ,, 6d.
Extra jaws **4/-** pair.



There are 3 types of jaws for these wire cutters—music wire, ordinary and bicycle rim wire.

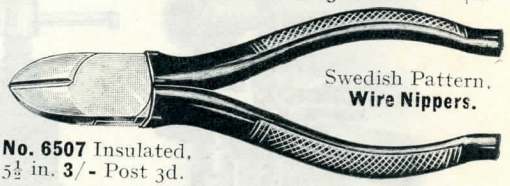
Wire Cutters



Toggle Wire Nippers
5 in. **1/7** Post 4d.
6 in. **1/9** ,, 5d.
7 in. **2/-** ,, 6d.
8 in. **2/3** ,, 6d.

Side Cutting Wire Nippers.

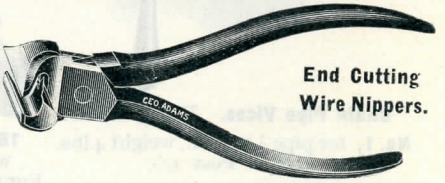
Size	3½	4	4½	5	6 in.
No. 122 British	**3/-**	**3/-**	**3/-**	**3/-**	**4/-**
No. 608 Foreign	**2/-**	**2/-**	**2/-**	**2/6**	**3/-**
Post	2d.	3d.	3d.	4d.	4d.



Swedish Pattern.
Wire Nippers.

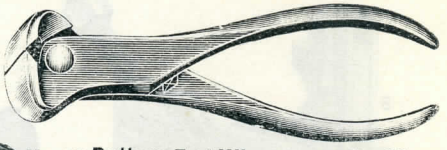
No. 6507 Insulated.
5½ in. **3/-** Post 3d.

No. 1707 Plain, 4 in. **2/-** 5 in. **2/6** 6 in. **3/-**
Post 3d. 4d. 4d.

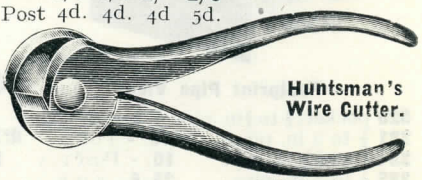


End Cutting Wire Nippers.

Size	3½	4	4½	5	6	7	8in.
No. 121 British	**3/-**	**3/-**	**3/-**	**3/-**	**4/-**	**5/6**	**7/3**
No. 600 Foreign	**2/-**	**2/-**	**2/-**	**2/6**	**3/-**	**3/6**	**4/-**
Post	2d.	3d.	3d.	4d.	4d.	5d.	6d.



Heavy Pattern End Wire Nippers No. 66.
Size 4½ 5 5½ 6in.
1/6 1/9 2/- 2/6
Post 4d. 4d. 4d 5d.

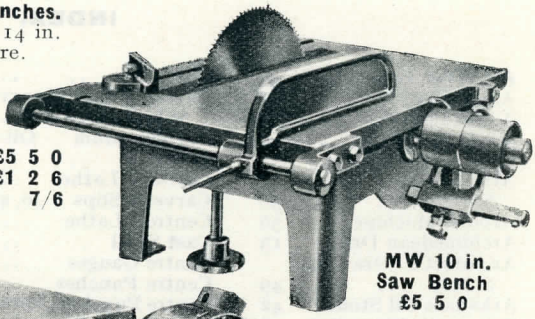


Huntsman's Wire Cutter.

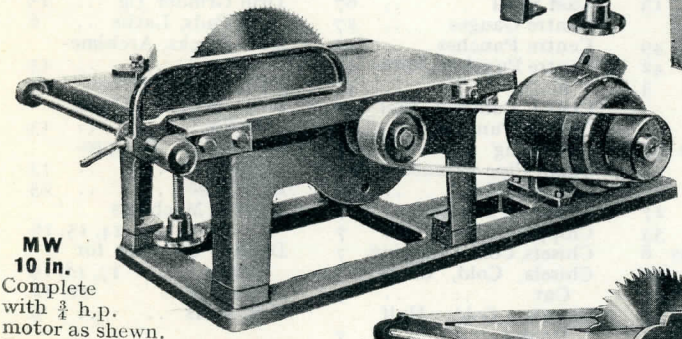
6 in. **2/8** Post 4d. 7 in. **3/3** Post 5d.

British made **Ball Bearing Saw Benches.**

MW 10 in. Rise and fall table 20 × 14 in. supplied with 10 in. saw, ¾ in. bore. Maximum depth of cut 3¼ in. Fast and loose pulleys 2¾ × 2 in. and belt striker, mitre fence and swing-over ripping fence. Maximum distance Saw to fence 9½ in. Weight 80 lbs. **£5 5 0**
suitable saw guard extra.. .. **£1 2 6**
Packing case 22 × 24 × 11 in. .. **7/6**
Weight packed 1 cwt.

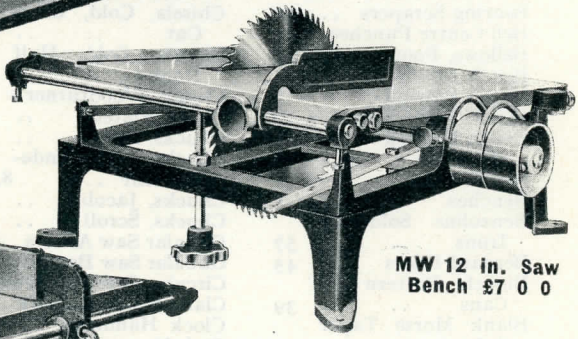


MW 10 in. Saw Bench £5 5 0

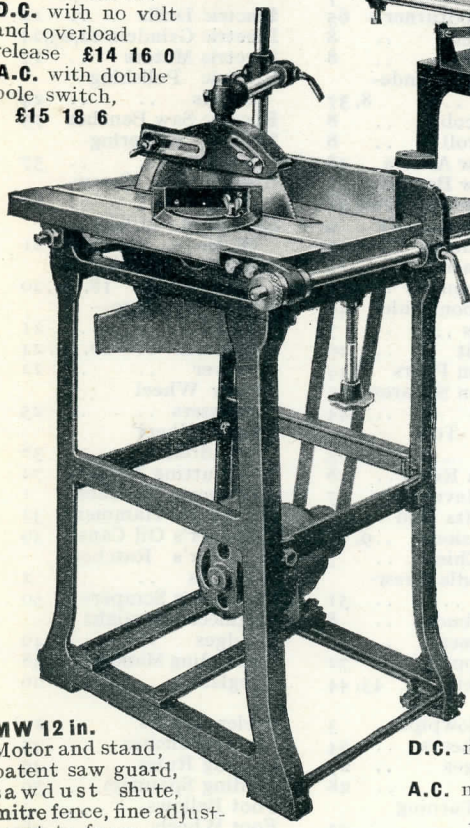


MW 10 in. on frame with elongated foot to carry electric motor. Price without motor **£7 0 0**

MW 10 in. Complete with ¾ h.p. motor as shewn. **D.C.** with no volt and overload release **£14 16 0** **A.C.** with double pole switch, **£15 18 6**



MW 12 in. Saw Bench £7 0 0



MW 12 in. Motor and stand, patent saw guard, sawdust shute, mitre fence, fine adjustment to fence.

MW 12 in. Rise and fall table 22 × 20 in. Supplied with 12 in. saw 1 in. bore, maximum depth of cut 4 in. Belt striker, fast and loose pulleys 3½ × 2 in., speed 2,000 revs. Table grooved for mitre fence. Swing-over ripping fence supplied. Maximum distance saw to fence 12 in. End of spindle drilled for taking boring bits. Net weight 1 cwt. **£7 0 0** as illustrated above. Extra for motor frame as **MW10** above **£2 0 0** Mitre fence, **12/6** Plain saw guard **£1 5 0** Fine screw adjustment to fence **10/6** Shipping weight 2 cwts., case 30 × 28 × 14 in. **15/-**

MW 12 in. on Floor Stand, height to top of bench 34 in. Complete with mitre and ripping fences, patented saw guard and sawdust shute. Weight 1½ cwts. **£12 10 0**

MW 12 in. on Stand with Motor. Fine adjustment to fence, mitre fence, patent saw guard, sawdust shute to carry dust away from motor. Complete as illustrated.

D.C. motor, 1 h.p. with no volt and overload release **£22 0 0**

A.C. motor, 1 h.p. single phase with double pole switch **£24 15 0**

Prices for 2 or 3 phase on application.

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Decimal Equivalents of Wire Gauge and Alphabet Drills.

No. 80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65
.0135	.0145	.016	.018	.02	.021	.0225	.024	.025	.026	.028	.0292	.031	.032	.033	.035
No. 64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49
.036	.037	.038	.039	.04	.041	.042	.043	.0465	.052	.055	.0595	.0635	.067	.07	.073
No. 48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33
.076	.0785	.081	.082	.086	.089	.0935	.096	.098	.0995	.1015	.104	.1065	.11	.111	.113
No. 32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
.116	.12	.1285	.136	.14	.144	.147	.1495	.152	.154	.157	.159	.161	.166	.1695	.173
No. 16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
.177	.18	.182	.185	.189	.191	.1935	.196	.199	.201	.204	.2055	.209	.213	.221	.228
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	
.234	.238	.242	.246	.25	.257	.261	.266	.272	.277	.281	.29	.295	.302	.316	
P	Q	R	S	T	U	V	W	X	Y	Z					
.323	.332	.339	.348	.358	.368	.377	.386	.397	.404	.413					

Decimal Equivalents of Imperial Standard Wire Gauge.

14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
.08	.072	.064	.056	.048	.040	.036	.032	.028	.024	.022	.02	.018	.0164	.0148
29	30	31	32	33										
.0136	.0124	.0116	.0108	.01										

Dimensions of BA Screw Threads.

BA No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Diam. m/m	6	5.3	4.7	4.1	3.6	3.2	2.8	2.5	2.2	1.9	1.7	1.5	1.3	1.2	1	.9	.79
Pitch m/m	1	.9	.81	.73	.66	.59	.53	.48	.43	.39	.35	.31	.28	.25	.23	.21	.19
Tapping	12	19	26	30	34	40	44	48	51	1½ m/m	55	56	62	65	70	72	74
Clearing	13	3	3/16	19	27	30	34	39	43	48	50	53	55	1.2 m/m	1 m/m	64	67

BSF Screws.

Diam.	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1 in.	
Threads per in.	26	22	20	18	16	16	14	14	12	12	11	11	10	
Tapping drill	7	F	5/16	U	27/64	31/64	35/64	39/64	21/32	23/32	49/64	53/64	7/8	

Speeds of Circular Saws for Wood.

8	10	12	14	16	18	20	22	24
4500	3600	3000	2600	2200	2000	1800	1650	1500 revs.

Speeds of Fine Tooth Circular Saws for Metal.

Diam.	50	60	70	80	90	100	m/m
Cast iron	80	65	55	50	45	40	revs.
Cast steel	100	85	70	60	55	50	do.
Mild steel	140	115	100	85	75	70	do.
Brass	240	200	170	155	130	120	do.

Speeds of Emery Wheels.

2 in.	9500	7 in.	2728
3 in.	6300	8 in.	2387
4 in.	4800	9 in.	2122
5 in.	3800	10 in.	1910
6 in.	3200	12 in.	1500

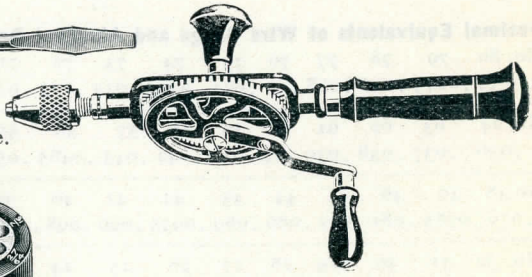
Speeds of Carbon Steel Twist Drills.

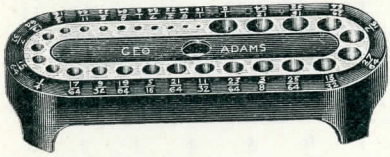
Diam.	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1 in.
Steel	1830	915	610	460	365	305	260	230	185	155	130	115
Cast iron	2140	1070	715	535	430	355	305	265	215	180	155	135
Brass	3665	1835	1220	915	735	610	525	460	365	305	260	230

High speed drills about 4 times above speeds.

No. 110 Ratchet Screwdriver
Right, Left and fixed. British made.

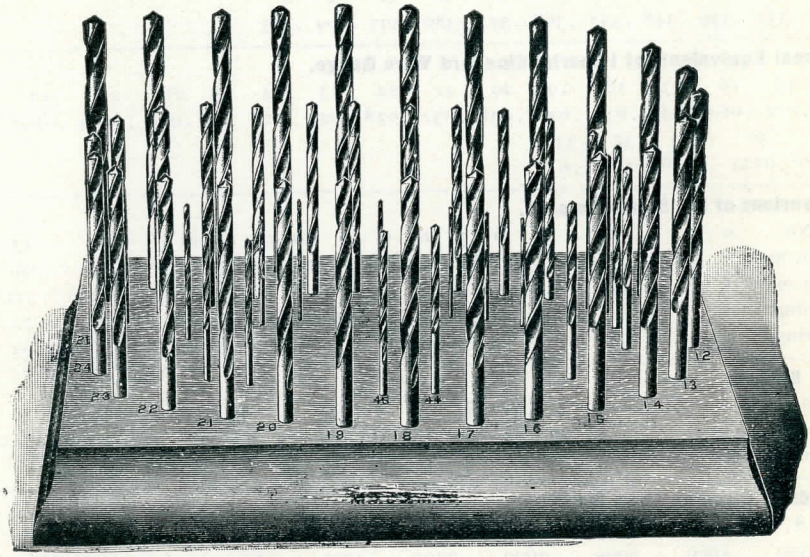
2	3	4	5	6 in. blade.
2/2	**2/3**	**2/4**	**2/5**	**2/6**
Post 3d.	4d.	4d.	5d.	6d.





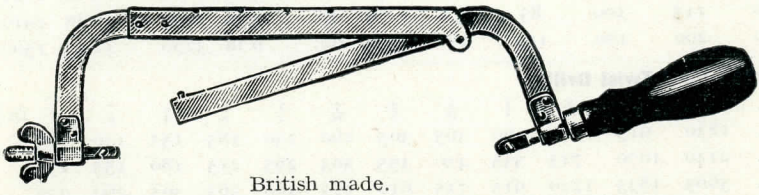
Aluminium Drill Stands. British made. Post
Takes drills $\frac{1}{16}$ to $\frac{1}{2}$ in. by 64ths, no drills **2/6** 6d.
With set British made twist drills **18/3** 9d.

Hand Drills, 2 pinions, hollow handle.
No. 330 12 in. long, chuck to $\frac{1}{4}$ in. **5/-** Post 9d.
No. 329 14 in. long, chuck to $\frac{3}{8}$ in. Extra wide rim to large gear. Ball thrust. **8/6** Post 9d.



Sets of British Made Twist Drills.

No. 5 Br.	$\frac{1}{16}$ to $\frac{1}{2}$ in. by 64ths on wooden stand		**19/3**	without stand	**15/9**	Post 9d.
6 Br.	$\frac{1}{16}$ to $\frac{1}{2}$ in. by 32nds	do.	**11/9**	do.	**8/3**	6d.
8 Br.	1 to 60 Gauge	do.	**21/-**	do.	**17/6**	6d.



British made.

No. 7 Adjustable Hacksaw Frame, takes 8 to 12 in. blades, is a heavier and deeper frame than the No. 66 pattern illustrated on page 30. **No. 7** with one blade **2/-** Post 6d.

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